TERA TOWER
SATA RAID II
Storage Appliance

CFI-B8283JD
User's Manual
December 2, 2010

Table of Contents

1 WELCOME 4

1.1 INTRODUCTION 4
1.2 PRECAUTION 5
1.3 FEATURES 5
1.3.1 OVERALL FEATURES 5
1.3.2 SATA FEATURES 6
1.3.3 USB FEATURES 6
1.4 SPECIFICATIONS 6
1.5 SYSTEM REQUIREMENTS 7
1.5.1 PC SYSTEMS 7
1.5.2 MACINTOSH SYSTEMS 7
1.6 PRODUCT CONTENTS 8

2 STORAGE POLICIES 9

2.1.1 CLEAN MODE 9
2.1.2 LARGE MODE 9
2.1.3 R00 MODE 10
2.1.4 R30 MODE 11
2.1.5 R50 MODE 13

3 INSTALLATION 15

3.1 INSTALLING HARD DISK DRIVE 15
3.2 POWER ON / OFF 17
3.3 INSTALLING SATA TO ESATA BRACKET CABLE 17
3.4 INSTALLING EH HOST BUS ADAPTER (OPTIONAL) 18
3.4.1 WINDOWS XP (32/64-BIT) 18
3.4.2 WINDOWS VISTA (32/64-BIT) 19
3.4.3 WINDOWS 7 (32/64-BIT) 21
3.4.4 MACINTOSH OS TIGER 10.4.X / LEOPARD 10.5.X / SNOW LEOPARD 10.6.X 24
3.5 INSTALLING NH HOST BUS ADAPTER (OPTIONAL) 28

4 CONFIGURATION 33

4.1 CONFIGURATION PREREQUISITES 33
4.1.1 SATA HOST CONNECTIONS 33
4.1.2 USB HOST CONNECTIONS 33
4.2 CHANGING HOST CONNECTIONS 33
4.3 DISCONNECTING A USB DEVICE 33
4.3.1 WINDOWS SYSTEMS 33
4.3.2 MACINTOSH SYSTEMS 34
4.4 HARD DISK DRIVE HOT SWAP 34
4.5 LED INDICATIVE STATUS 34
4.5.1 POWER LED 35
4.5.2 SYSTEM LED 35

4.5.3 HRAD DISK DRIVE LED....35
4.6 MODE SETTING....35
4.6.1 CLEAN MODE....36
4.6.2 LARGE MODE....38
4.6.3 R00 MODE....39
4.6.4 R30 MODE....40
4.6.5 R50 MODE....42
4.7 REBUILDING A REDUNDANCY DRIVE....43

5 PARTITIONING VOLUMES....45

5.1 PARTITION A VOLUME....45
5.1.1 WINDOWS SYSTEMS....45
5.1.2 MACINTOSH SYSTEMS....50

6 APPENDIX....52

6.1 FAQ....52
6.2 HARD DISK DRIVE COMPATIBILITY LIST....52
6.3 MOTHERBOARD COMPATIBILITY LIST....55

1 WELCOME

1.1 INTRODUCTION

Thank you for choosing *TEAR TOWER SATA RAID II* storage appliance. It is a low-cost solution for digital home and small office storage appliances. Features of the *TEAR TOWER SATA RAID II* include advanced RAID modes. It's available from leading storage partners in pre-configured set-ups with USB or eSATA host connections. Simply connect the appliance with an appropriate USB or eSATA cable to the USB host or eSATA bracket cable (must be connected to your mainboard SATA port) or HBA (eSATA host bus adapter can be purchased separately and must be installed in your host computer); it's that simple.

The *TEAR TOWER SATA RAID II* storage appliance are available in 5 different configurations (Clean, Large, R00, R30, and R50), each offering a different application of features and capabilities.

The *TEAR TOWER SATA RAID II* Storage Processors are powered by JMicron's JMB394, JMB391 and JMS539 chips. It is designed to provide SATA port expansion, data protection and performance aggregation at various applications. It is a self-contained storage processor chip which completely frees up the main CPU loading and the SATA ports comply with eSATA specification, the USB ports comply with Super Speed USB specification, making it suitable for use in external storage applications.

The *TEAR TOWER SATA RAID II* storage appliance uses JMicron's production-proven Multi-port Serial ATA PHY technology and JMicron-proprietary storage processor to provide very high efficient SATA RAID operation.

With an easy configuration scheme, the device can be a pure port-multiplier which provides SATA port expansion just like a SATA Hub, or hard-drive performance booster which provides a high performance device seen by host controller or hard-drive data protector which automatically backup data to prevent data loss from hard-drive damage. *TEAR TOWER SATA RAID II* storage appliance also has advance mode to provide both benefit of performance boost and data protection.

The *TEAR TOWER SATA RAID II* storage appliance architecture which provides:

- Fully hardware-accelerated RAID Engine.
- No driver, BIOS or software required for RAID operation.
- Independent of device SATA port connection sequence.
- Rebuild proceeds continuously between power cycling.
- Supports on-line read data integrity check.
- Supports on-line command based bad sector recovery.
- Supports disk modes: Clean, Large.
- Supports RAID levels: 00, 30, and 50 modes.
- RAID 30 / 50 write-back cache to enhance performance.
- Supports Auto-Rebuild on R30, and R50 modes.
- Rebuild speed: 200GB/hour.
- Supports various RAID configuration methods.

1.2 PRECAUTION

Please read the safe precautions carefully before you using *TEAR TOWER SATA RAID II* storage appliance. Ensure that you use the product correctly according to the procedure described in this guide.

The following safety precautions are intended to remind you to operate the product safely and correctly. Please read and ensure that you understand them before you proceed to the other sections of this guide.

- Do not attempt to disassemble or alter any part of the product that is not describe in this guide.
- Do not allow the product to come into contact with water or other liquids. In the event that water or other liquids enter the interior, immediately unplug the product from the computer. Continued use of the product may result in fire or electrical shock. Please consult your product distributor or the closest support center.
- Do not handle the product near a heat source or expose them to direct flame or heat.
- Never place the product in close to equipment generating storage electromagnetic fields. Exposure to strong magnetic fields may cause malfunctions or corrupt data.
- Can't operate properly under Windows 3.x/ 95 / 98SE/ ME/ NT.
- Hard disk drive is not including.
- Please be noted the following product may run irregularly which are not under warranty.
    - ✓ Toshiba DynaBook, Satellite series (All K6 CPU models).
    - ✓ IBM Aptiva E series (All K6 CPU models).
    - ✓ Sotec E-note M260 series.
    - ✓ All AMD K6 system.
    - ✓ PC with sis7000/ 7001/ 7002 PCI to USB host controller.

1.3 FEATURES

1.3.1 OVERALL FEATURES

- Provides Clean, Large, R00, R30, and R50 modes for effective storage management.
- Easy configuration of RAID modes, no IT expertise required.
- Easy monitoring of system status via LED indicators.
- Ensures data integrity with redundant backup capability.
- Achieves fastest performance via R00 mode.
- Supports automatic rebuild in R30, and R50 mode.
- Supports current SATA II compliant HDDs, backward compatible with most SATA I compliant HDDs.
- Simplifies HDD installation; user friendly design enables effortless HDD swapping.
- Flexible connection via eSATA or USB host port.
- Eliminates potential downtime, repair costs, and lost sales due to disk failure.
- Dissipates heat efficiently with metal housing.
- Maximizes airflow with silent, high quality fan.
- 1 host port (eSATA or USB) to 8 Serial ATA hard disk drives.
- Compatible with SATA Gen1 and Gen2 host controllers.
- Compatible USB2.0 and 3.0 specifications.

- Embedded fast Storage Processor.
- Ultra-fast 3Gbps host and device port capability.
- Greater than 200MBps sustained reads in R00 mode (limited by drives and host controller).

1.3.2 SATA FEATURES

The *TEAR TOWER SATA RAID II* provides the following Serial Advanced Technology Attachment features:

- 1 eSATA host port to 8 SATA devices (Port Multiplier Functionality).
- Auto-negotiation between SATA I (1.5Gpbs) and SATA II (3Gpbs).
- Supports SATA II Gen2i and Gen2m (External SATA Connection, eSATA).
- Supports Hot-Plug on CLEAN MODE.
- Supports PM aware and non-PM aware host on RAID mode.
- Supports asynchronous signal recovery.
- Supports spread spectrum clocking.
- Supports BIST and loopback mode.
- Supports 48-bit LBA addressing.
- Supports ATAPI drives.
- Supports host control of hard disk drive staggered spin-up.
- Supports Asynchronous Notification.
- Output swing control and automatic impedance calibration for SATA II PHY.

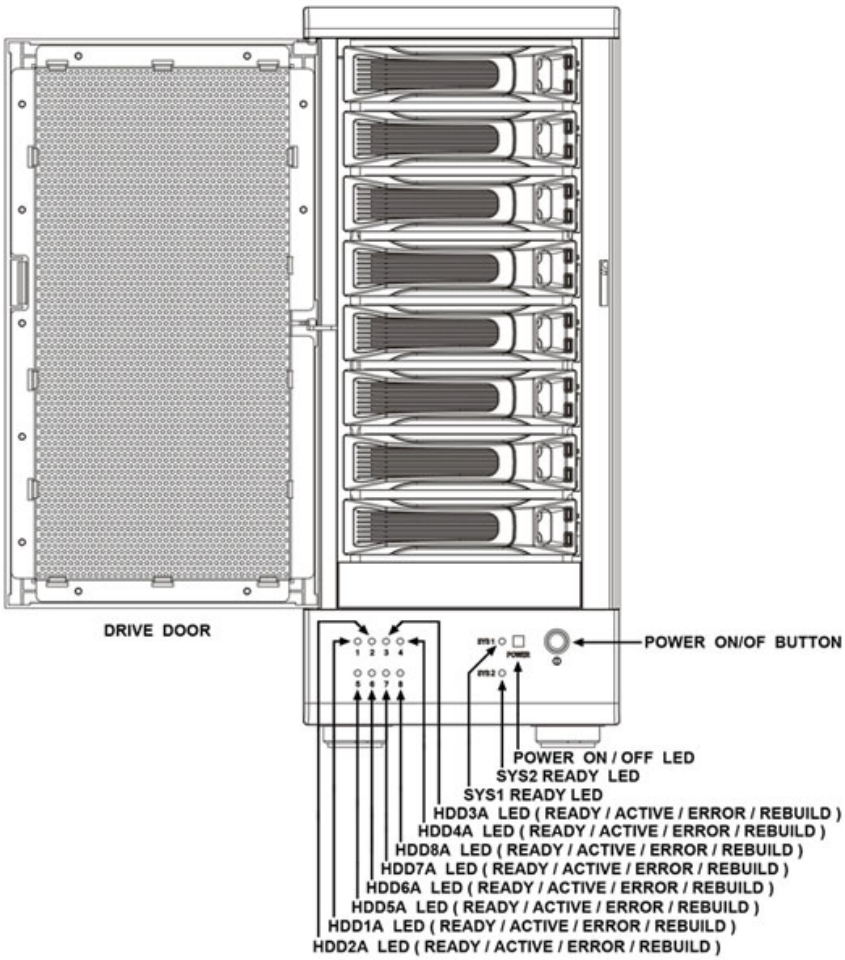
1.3.3 USB FEATURES

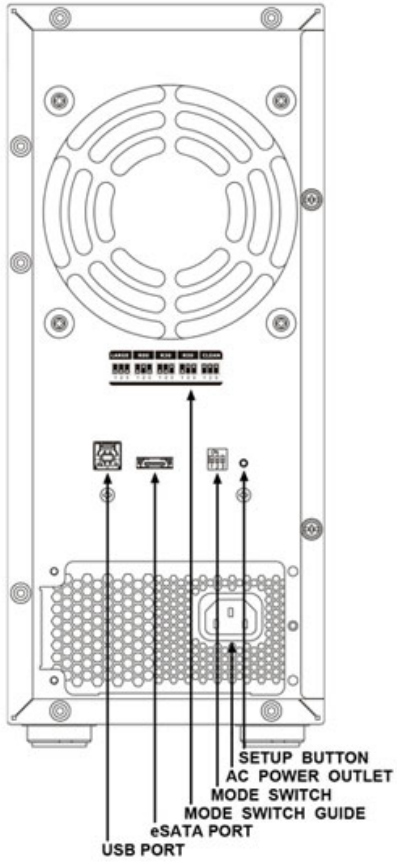
The *TEAR TOWER SATA RAID II* provides the following Universal Serial Bus (USB) features:

- 1 USB3.0 host port to 8 SATA devices.
- Operates at USB low speed and super speed rates (1.5Mb ~ 5GB/s).
- OS independent, Driverless, Auto Configuration.
- Support USB Super Speed, High Speed and Full Speed Operations.
- Supports and compatible with OHCI/UHCI/EHCI hosts.
- Support Mass Storage Class.
- Support on line USB firmware update.
- Compliance with USB3.0 electrical specification.
- Compliance with USB Mass Storage Class, Bulk-Only Transport Specification.

1.4 SPECIFICATIONS

- Design based on the JMicron's JMB394, JMB391 and JMS539 controllers.
- Support Clean, Large, R00, R30, and R50 modes.
- Power, SYS1, SYS2, and 8 HDD status and activity LEDs.
- Eight 3.5-inch SATA HDDs to a standard B type USB or eSATA interface with HDD trays & door cover.
- Metal chassis (SECC) and plastic panel frame (ABS) with HDD trays (SECC and ABS) design.
- 150 (W) x 340 (H) x 340 (D) mm, NW: 6.5 Kgs, GW: 8.6Kgs.
- 300 watts switching power, 90 to 264Vac / 47~63Hz with CE/ FCC/ VCCI/ UL/ C-UL/ TUV/ CB/ BSMI/ CCC requirement. Physical Dimensions: 100 mm (L) x 125 mm (W) x 63.5 mm (H).
- Single packing (color box) and 2 in 1 outer box.


DRIVE DOOR
POWER ON/OF BUTTON
POWER ON / OFF LED
SYS2 READY LED
SYS1 READY LED
HDD3A LED (READY / ACTIVE / ERROR / REBUILD)
HDD4A LED (READY / ACTIVE / ERROR / REBUILD)
HDD8A LED (READY / ACTIVE / ERROR / REBUILD)
HDD7A LED (READY / ACTIVE / ERROR / REBUILD)
HDD6A LED (READY / ACTIVE / ERROR / REBUILD)
HDD5A LED (READY / ACTIVE / ERROR / REBUILD)
HDD1A LED (READY / ACTIVE / ERROR / REBUILD)
HDD2A LED (READY / ACTIVE / ERROR / REBUILD)



1.5 SYSTEM REQUIREMENTS

1.5.1 PC SYSTEMS

- Intel Pentium-III 500MHz equivalent or faster
- Windows XP, Windows Vista, Windows 7 with the latest Service Packs
- CD-ROM drive
- 64 MB of RAM (minimum)
- 250 MB of free disk space
- Super VGA (800 x 600) or higher resolution display with at least 256 colors
- Mouse or compatible pointing device
- USB connection: USB2.0 or 3.0 direct host connection
- SATA connection: Intel ICH (Refer to the Mother Board Compatibility List Charpter) or optional Host Bus Adapter card (controller number Sii3132/uPD720200) and associated software drivers with Port Multiplier support

Note: There is a 2TB limitation, when system is connecting to ICH in the Windows XP 32/64bit.

1.5.2 MACINTOSH SYSTEMS

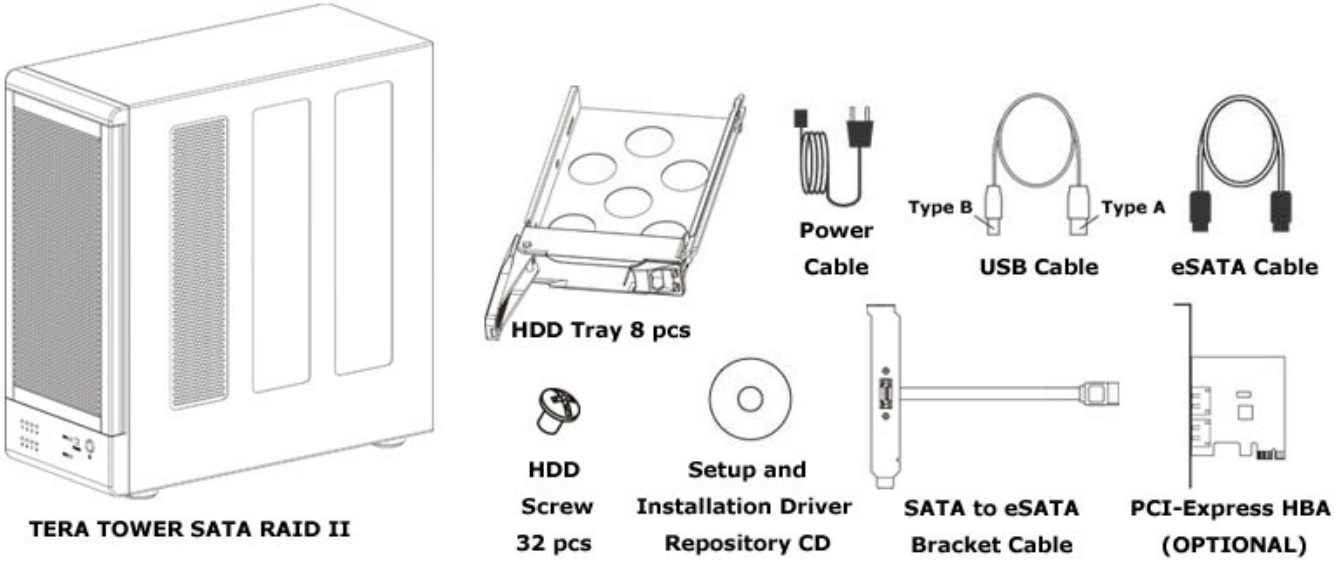
- Mac Pro
- Mac OS Tiger 10.4.x

- Mac OS Leopard 10.5.x
- Mac OS Snow Leopard 10.6.x
- CD-ROM drive
- Mouse or compatible pointing device
- SATA connection: Optional Host Bus Adapter card (controller number Sii3132) and associated software drivers with Port Multiplier support
- USB connection: USB2.0 or 3.0 direct host connection

1.6 PRODUCT CONTENTS

The following parts are content.

- TEAR TOWER SATA RAID II x 1.
- HDD Tray x 8.
- Power Cable x 1.
- USB Cable x 1.
- eSATA Cable x 1.
- HDD Screw x 32.
- Setup and Installation Driver Repository CD x 1.
- SATA to eSATA Bracket Cable x 1.
- PCI-Express HBA x 1 (Optional).



2 STORAGE POLICIES

You can configure the *TEAR TOWER SATA RAID II* storage appliance to use any of the following storage policies to map the appliance's physical hard drives to virtual drives that are visible to the host computer. The virtual drives are called ***volumes***. The host operating system treats each volume as if it were a single physical drive. This virtualization allows you to overcome restrictions that are imposed by physical hard drives, such as speed, storage capacity or data storage reliability.

2.1.1 CLEAN MODE

The CLEAN MODE storage policy enables each hard drive to be seen separately as one drive. When using a SATA host controller, CLEAN MODE should only be used if the SATA host controller provides Port Multiplier (PM) support. If a host is not PM-aware, only a single drive is presented (drive 1). No such limitation if using a USB host connection.

The CLEAN MODE storage policy is available for a standalone (non-cascaded) storage or the top-level node of a cascaded configuration, but not for subordinate nodes. Even though you can use the MODE SWITCH to select CLEAN MODE for any node in a cascaded configuration, only the first CLEAN MODE volume of any subordinate node is detected by your host. Therefore, selecting CLEAN MODE for any subordinate node is not recommended.

In a CLEAN MODE configuration, the *TEAR TOWER SATA RAID II* storage appliance directly exposes each physical drive.

The CLEAN MODE will not clean up the drives partition if the drives were use as single drive before.

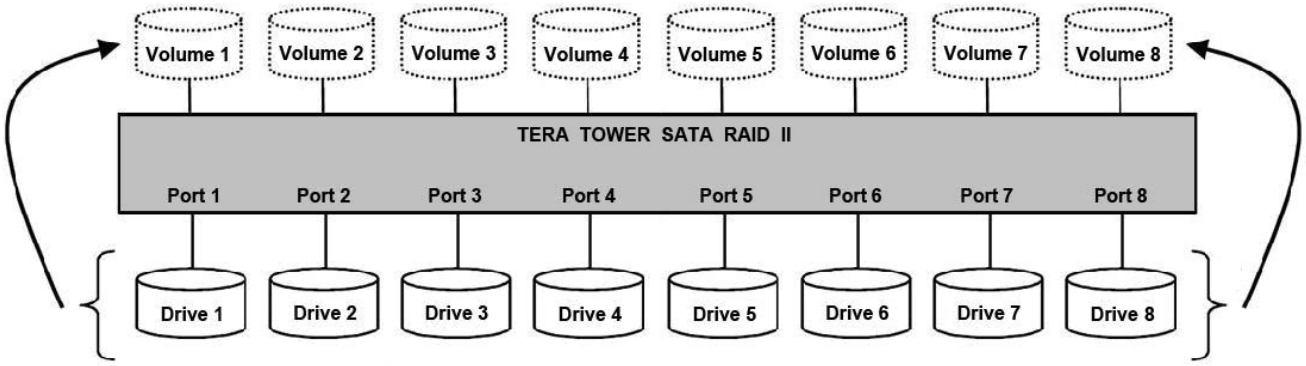


Figure: CLEAN MODE storage policy sample configuration.

2.1.2 LARGE MODE

The LARGE MODE storage policy concatenates a series of physical hard drives as a single large volume; resulting in a seamless expansion of virtual volumes beyond the physical limitations of singularly connected hard drives. *TEAR TOWER SATA RAID II* storage policy delivers maximum storage space without a single large capacity and costly hard drive.

Any node within a cascaded configuration can be set to LARGE MODE.

Hard drives 1 to 8 are concatenated into a single virtual volume in the Figure below with a storage capacity that is equal to the sum of each of the physical hard drives 1 to 8.

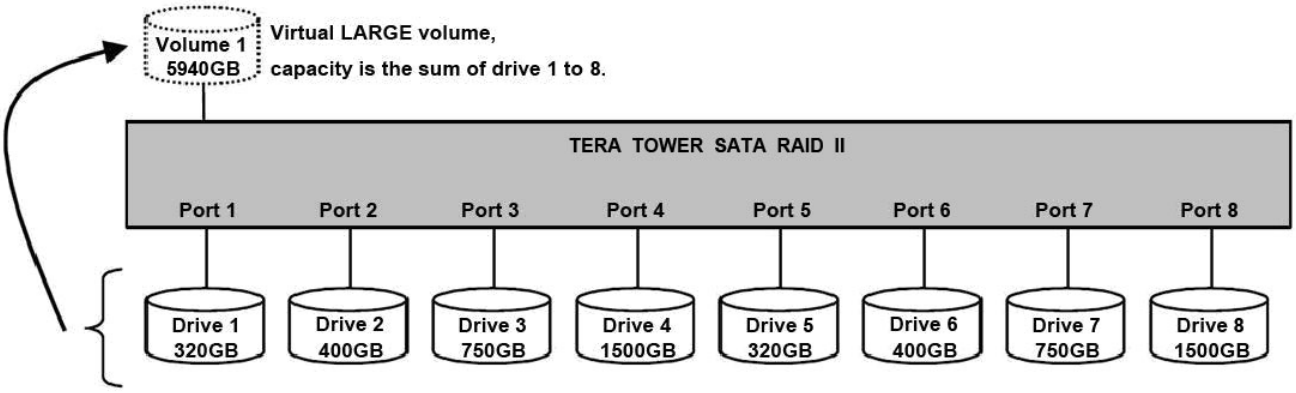


Figure: LARGE MODE storage policy sample configuration.

It is also possible to create a LARGE volume using only a single hard disk drive connected to Port 1. However, it is not possible to expand an existing LARGE volume by adding another hard disk drive and still preserve any existing data on that volume.

2.1.3 R00 MODE

The R00 MODE storage policy distributes access across all hard disks by three RAID systems. R00 MODE presents the best data speed but no data redundancy. R00 MODE storage policy accelerates hard disk drive operating speed by using many disks in parallel. Hard disk drive data segments are written to different disks simultaneously which increases performance while sacrificing data redundancy.

To implement the R00 MODE storage policy, the *TERA TOWER SATA RAID II* Storage first creates 2 single virtual volumes that are *striped* across hard drive(s) on SYS1 and SYS2 individually, and then *striped* across both virtual volumes again.

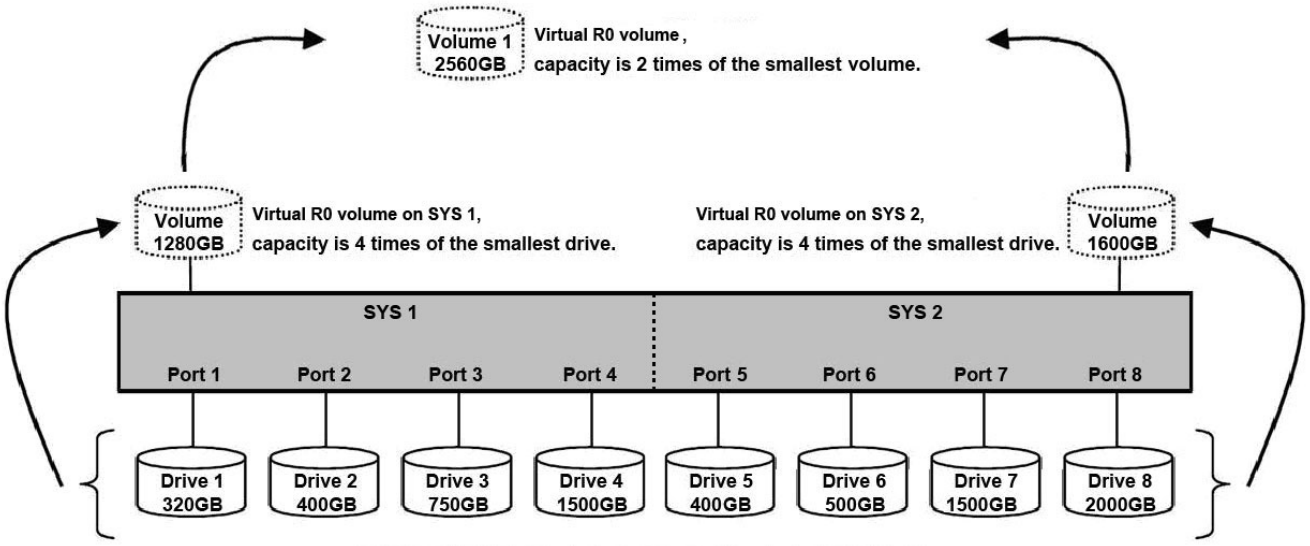


Figure: R00 MODE storage policy sample configuration 1.

It is also possible to create a R00 volume using only a single hard disk drive connected to Port 1. However, the *TEAR TOWER SATA RAID II* storage appliance directly exposes 1 physical drive, and it will clean up the drives partition even if the drives were use as single drive before.

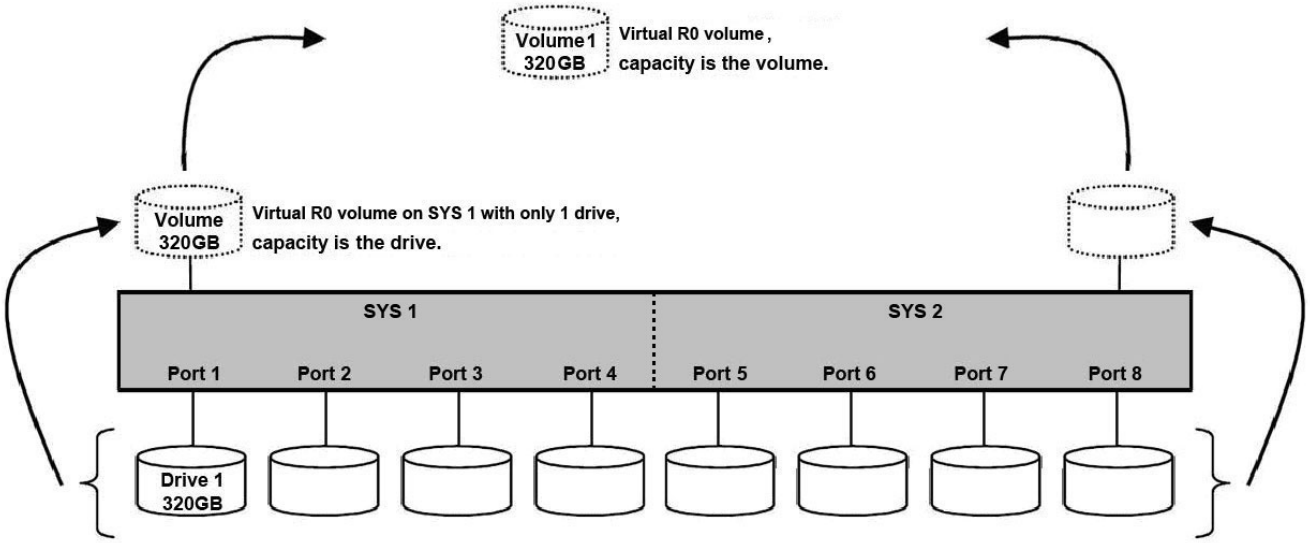
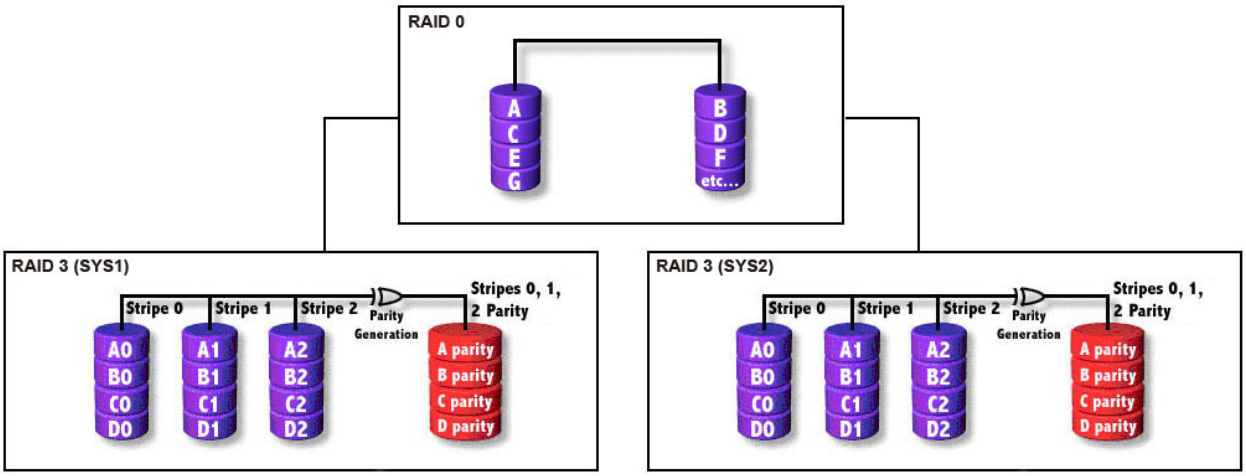


Figure: R00 MODE storage policy sample configuration 2.

2.1.4 R30 MODE

The R30 MODE adds fault tolerance to drive striping by including parity information with the data. R30 MODE dedicates the equivalent of two drives for storing parity stripes on both systems (SYS1 and SYS2), and then stripe the systems together. The data and parity information are arranged on the drive arrays so that paritys are written to two drives on both systems (SYS1 and SYS2). The following example illustrates how the parity is rotated from drive to drive.



The R30 MODE uses less capacity for protection and is the preferred method to reduce the cost per megabyte for larger installations.

In exchange for low overhead necessary to implement protection, the R30 MODE degrades performance for all write operations. The parity calculations for R30 MODE may result in read performance that is somewhat slower than the write performance.

The resulting storage capacity of the virtual R30 volume will be N-2 times (“N” is the number of drive) of the smallest drive.

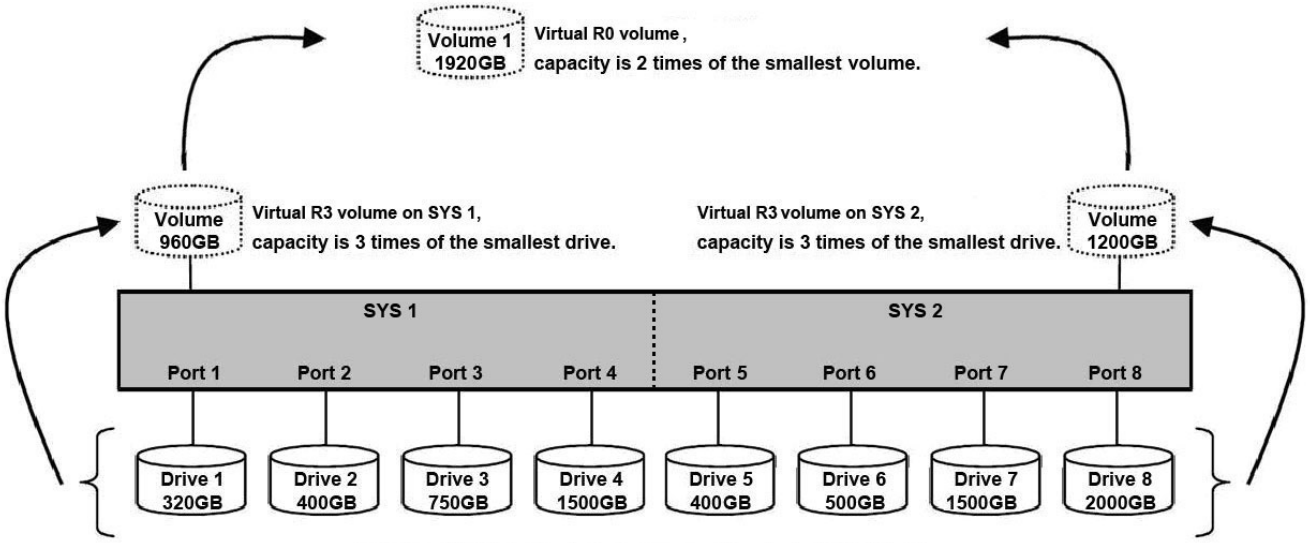


Figure: R30 MODE storage policy sample configuration 1.

If one drive fails, the virtual R30 volume is still usable, but it is in a vulnerable state because its mirrored hard drive is inaccessible. When the offline drive comes back online, the appliance begins a rebuild process immediately to restore data redundancy. A message appears in the LED indicator to notify you that a rebuild is in progress.

Although the volume remains available during the rebuild process, the volume is susceptible to data loss through damage to the remaining drive until redundancy is restored at the end of the rebuild and verification process. Host access takes precedence over the rebuild process. If you continue to use the virtual R30 volume during the rebuild, the rebuild process will take a longer time to complete, and the host data transfer performance will also be affected.

It is also possible to create a R30 volume using only a single hard disk drive connected to Port 1. However, the *TEAR TOWER SATA RAID II* storage appliance directly exposes 1 physical drive, and it will clean up the drives partition even if the drives were use as single drive before.

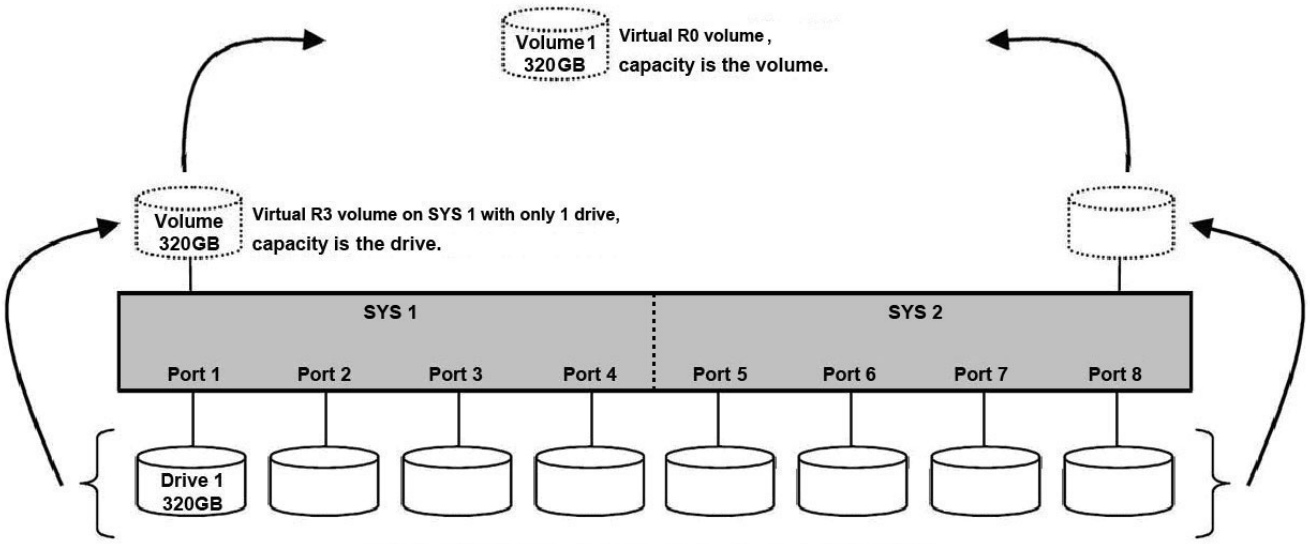
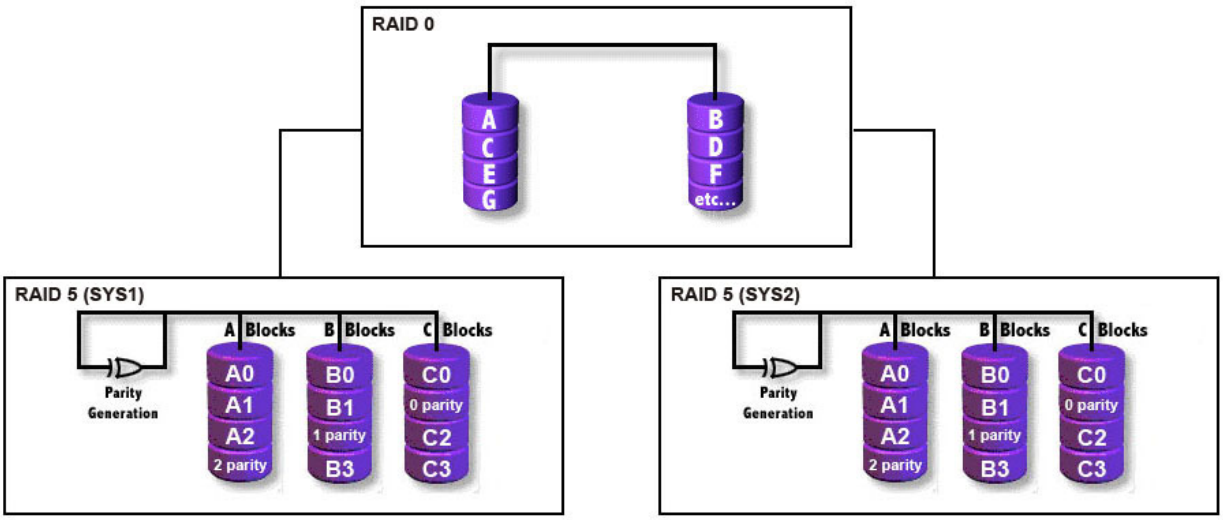


Figure: R30 MODE storage policy sample configuration 2.

2.1.5 R50 MODE

The R50 MODE adds fault tolerance to drive striping by including parity information with the data. R50 MODE dedicates the equivalent of one drive for storing parity stripes on both systems (SYS1 and SYS2), and then stripe the systems together. The data and parity information is arranged on the drive array so that parity is written to all drives on both systems (SYS1 and SYS2). The following example illustrates how the parity is rotated from drive to drive.



The R50 MODE uses less capacity for protection and is the preferred method to reduce the cost per megabyte for larger installations.

In exchange for low overhead necessary to implement protection, the R50 MODE degrades performance for all write operations. The parity calculations for R50 MODE may result in read performance that is somewhat slower than the write performance.

The resulting storage capacity of the virtual R50 volume will be N-2 times (“N” is the number of drive) of the smallest drive.

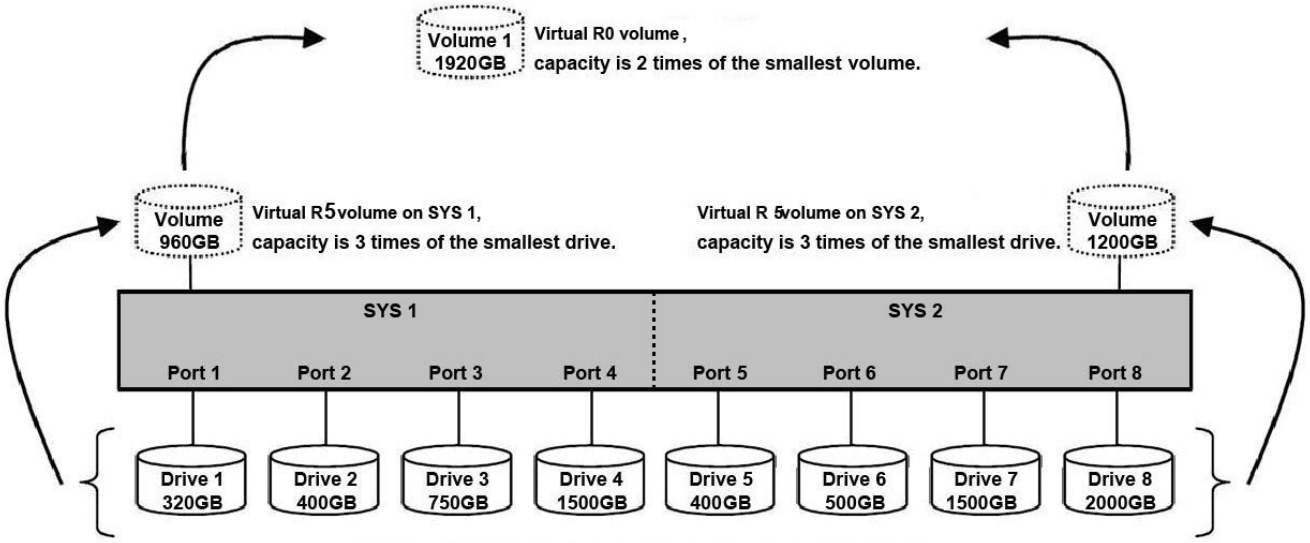


Figure: R50 MODE storage policy sample configuration 1.

If one drive fails, the virtual R50 volume is still usable, but it is in a vulnerable state because its mirrored hard drive is inaccessible. When the offline drive comes back online, the appliance begins a rebuild process immediately to restore data redundancy. A message appears in the LED indicator to notify you that a rebuild is in progress.

Although the volume remains available during the rebuild process, the volume is susceptible to data loss through damage to the remaining drive until redundancy is restored at the end of the rebuild and verification process. Host access takes precedence over the rebuild process. If you continue to use the virtual R50 volume during the rebuild, the rebuild process will take a longer time to complete, and the host data transfer performance will also be affected.

It is also possible to create a R50 volume using only a single hard disk drive connected to Port 1. However, the *TEAR TOWER SATA RAID II* storage appliance directly exposes 1 physical drive, and it will clean up the drives partition if the drives were use as single drive before.

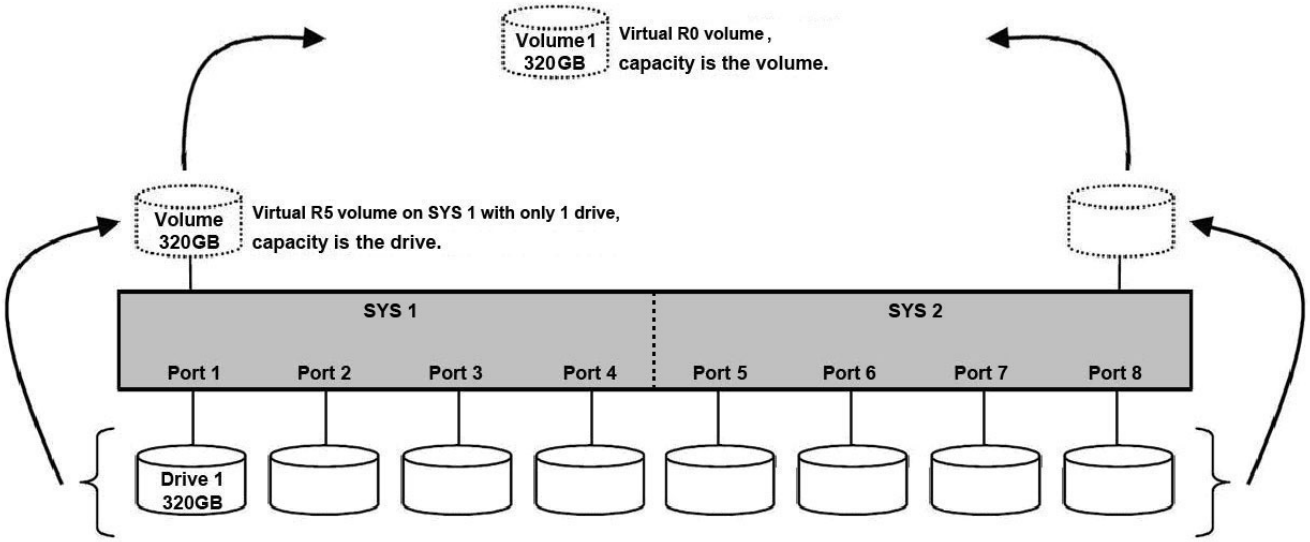


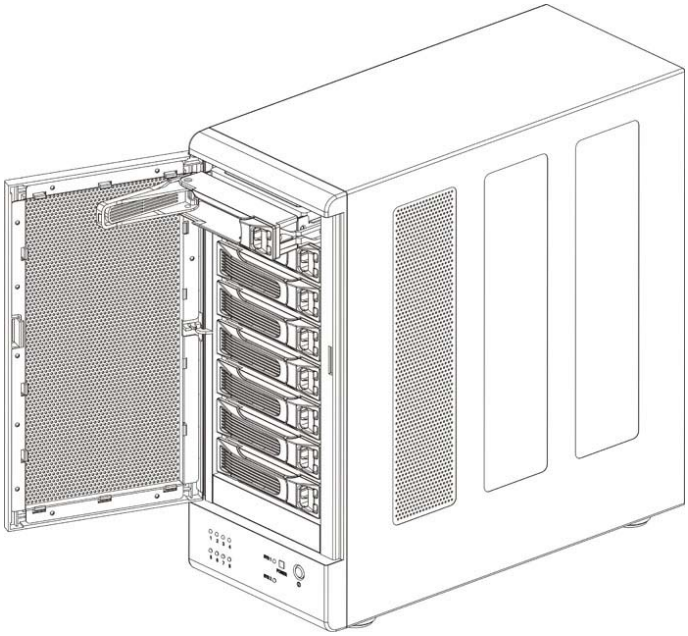
Figure: R50 MODE storage policy sample configuration 2.

3 INSTALLATION

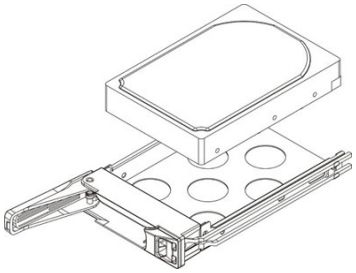
3.1 INSTALLING HARD DISK DRIVE

Please refer below procedure to complete the HDD installation.

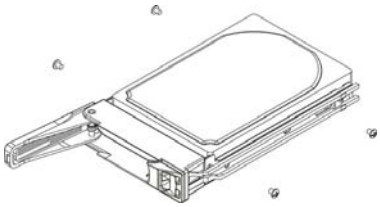
• Open the drive door than unlock the HDD tray lock to remove the HDD trays from *TERA TOWER SATA RAID II*.



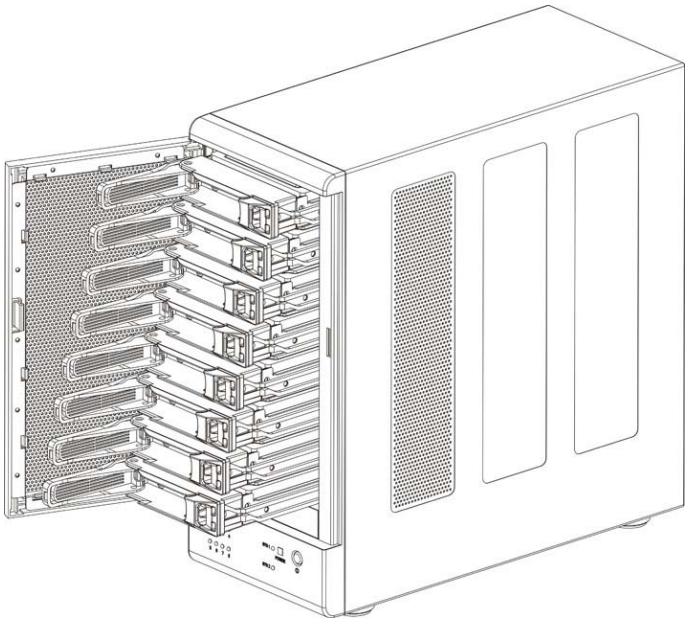
• Install the HDD into the HDD tray.



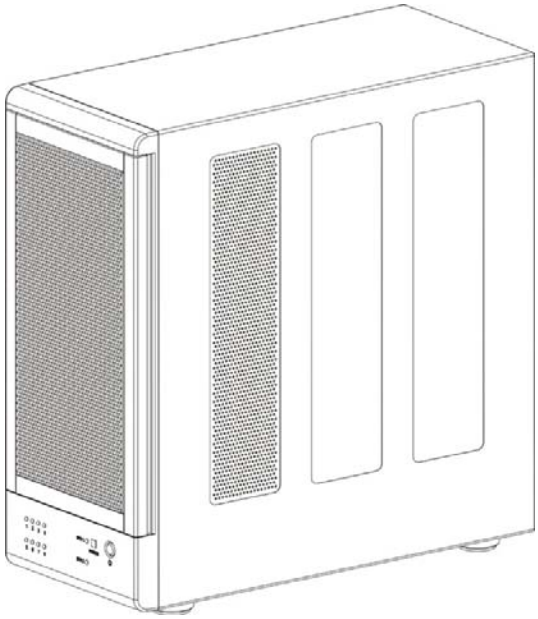
• Twist the HDD screws shut to seat the drive securely.



• Insert the HDD tray back to the *TERA TOWER SATA RAID II*.

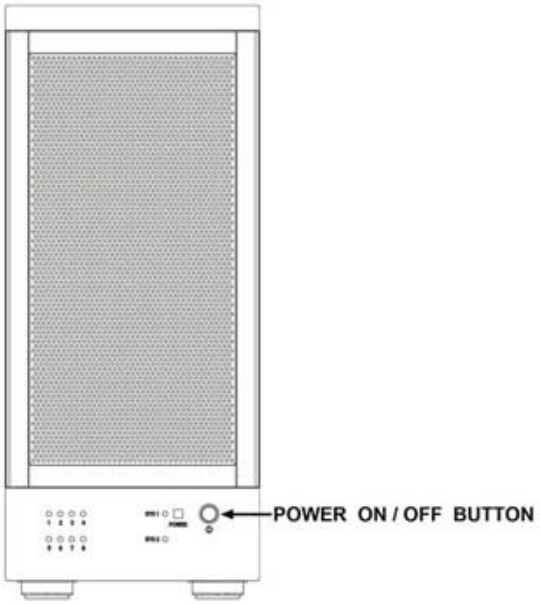


• Close the drive door to complete hard drive disk installation.



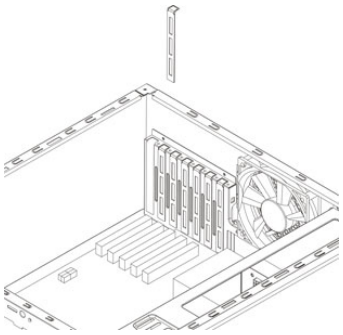
3.2 POWER ON / OFF

• Push the power button to power on, and push again to power off.

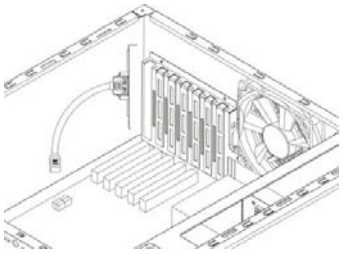


3.3 INSTALLING SATA TO eSATA BRACKET CABLE

• Remove a free I/O bracket from your computer.



• Install the SATA TO eSATA BRACKET CABLE to the free I/O bracket, and connect the SATA cable to a free SATA port from your computer.



3.4 INSTALLING EH HOST BUS ADAPTER (OPTIONAL)

The *EH* Host Bus Adapter (HBA) is powered by Silicon Image® Sii3132 host controller. The Silicon Image® SiI3132 is a two-port PCI Express to Serial ATA controller, it supports maximum 15 devices. The SiI3132 is designed to provide multiple port serial ATA connectivity with minimal host overhead and host to device latency. The SiI3132 supports a 1-lane 2.5 Gb/s

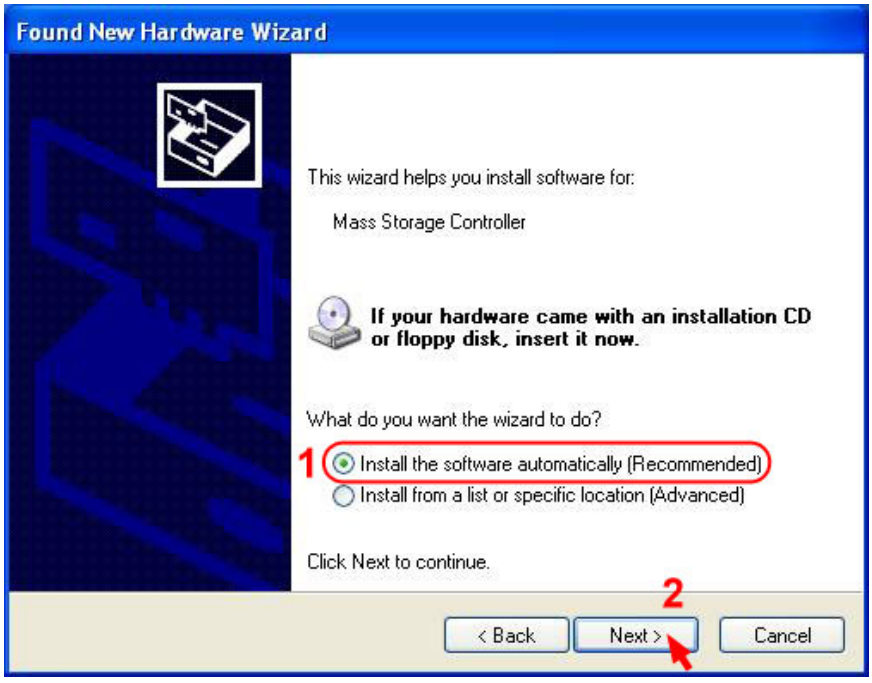
PCI Express bus and the Serial ATA Generation 2 transfer rate of 3.0 Gb/s (300 MB/s).

3.4.1 WINDOWS XP (32/64-bit)

1. Select **No, not this time**, than click **Next**.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
1
Click Next to continue.
2
< Back
Next >
Cancel

2. Select **Install the software automatically (Recommended)**, than click **Next**.


Found New Hardware Wizard
This wizard helps you install software for:
Mass Storage Controller
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
1
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
2
< Back
Next >
Cancel

3. Click **Finish** to complete installation.

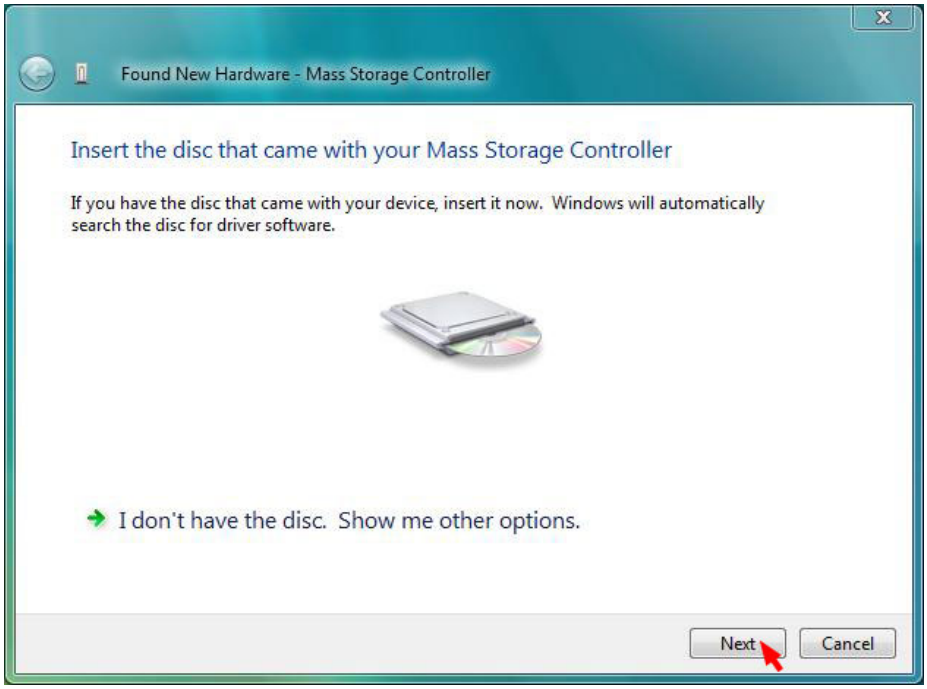
Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
Silicon Image Sil 3132 SATALink Controller
Click Finish to close the wizard.
< Back
Finish
Cancel

3.4.2 WINDOWS VISTA (32/64-bit)

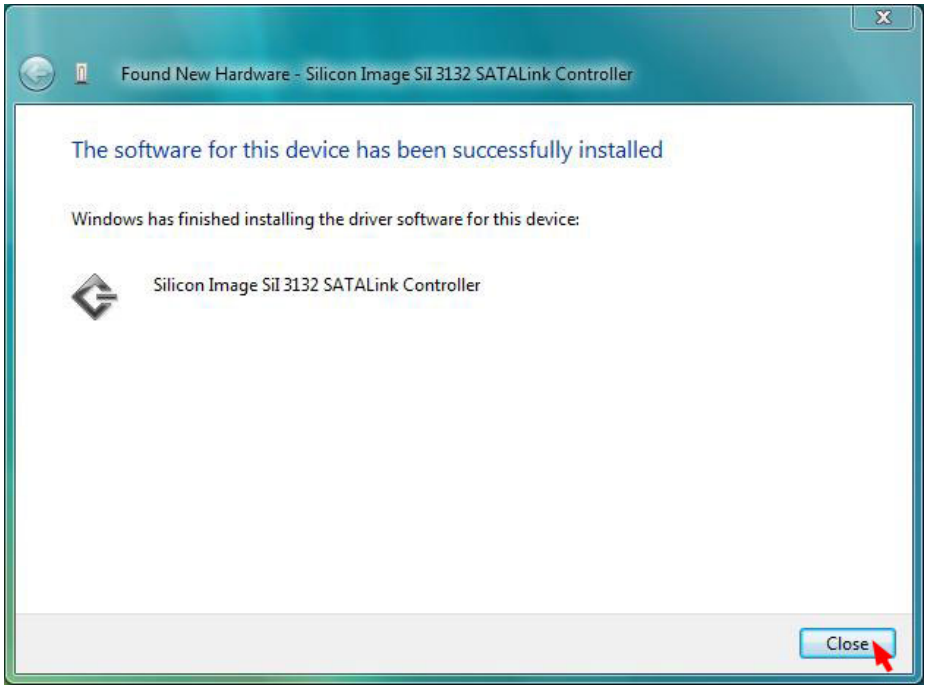
1. Click **Locate and install driver software (recommended)**.

Found New Hardware
Windows needs to install driver software for your Mass Storage Controller
Locate and install driver software (recommended)
Windows will guide you through the process of installing driver software for your device.
Ask me again later
Windows will ask again the next time you plug in your device or log on.
Don't show this message again for this device
Your device will not function until you install driver software.
Cancel

2. Click **Next** for next step.

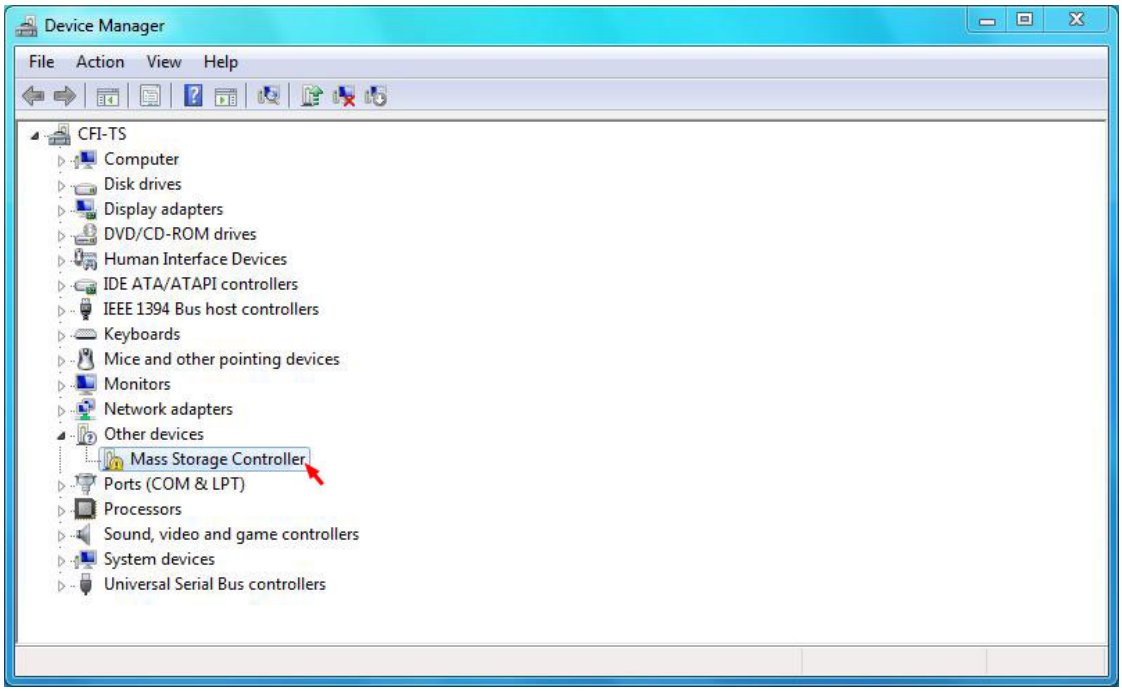

Found New Hardware - Mass Storage Controller
Insert the disc that came with your Mass Storage Controller
If you have the disc that came with your device, insert it now. Windows will automatically search the disc for driver software.
I don't have the disc. Show me other options.
Next
Cancel

3. Click **Close** to complete installation.

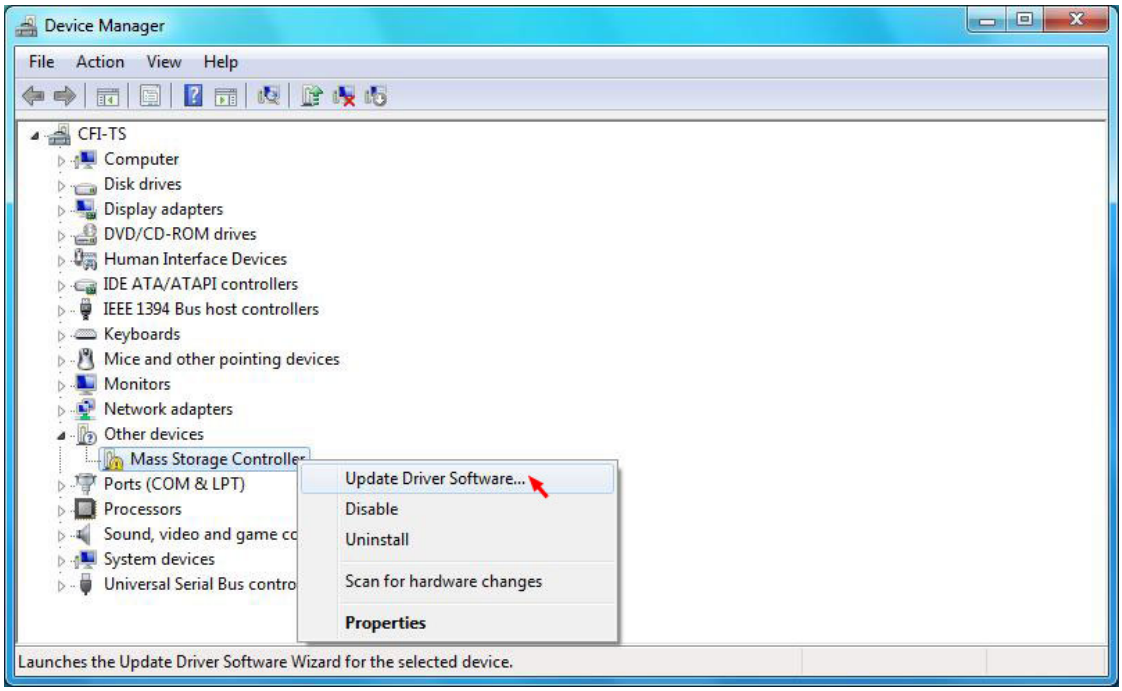

Found New Hardware - Silicon Image SiI 3132 SATALink Controller
The software for this device has been successfully installed
Windows has finished installing the driver software for this device:
Silicon Image SiI 3132 SATALink Controller
Close

3.4.3 WINDOWS 7 (32/64-bit)

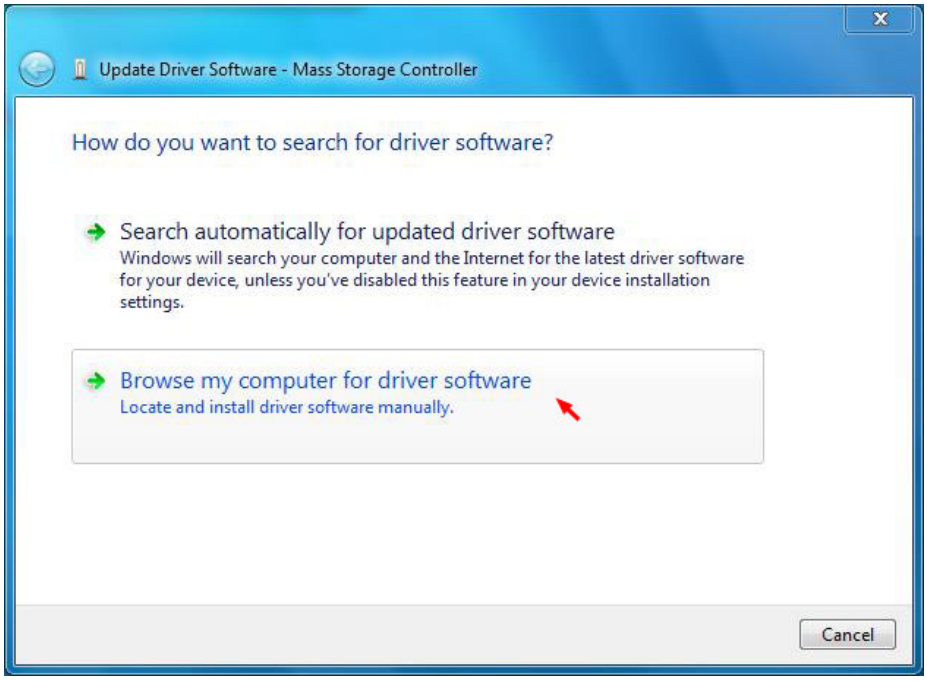
1. Go to the **Device Manager**.



2. Right click on the **Mass Storage Controller**, than Select **Update Driver Software**.



3. Click **Browse my computer for driver software**.

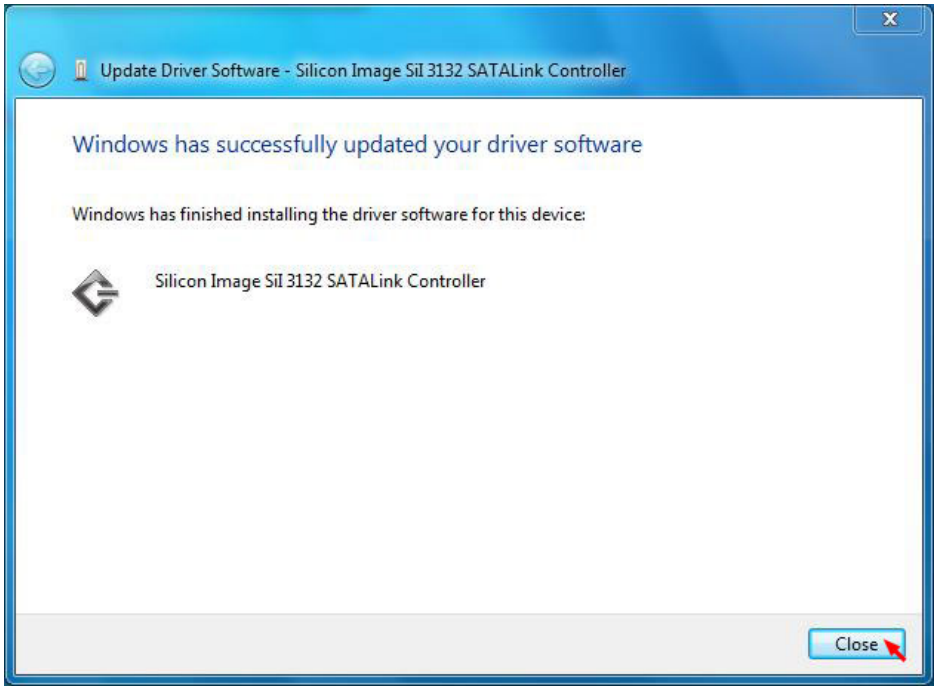

Update Driver Software - Mass Storage Controller
How do you want to search for driver software?
Search automatically for updated driver software
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.
Browse my computer for driver software
Locate and install driver software manually.
Cancel

4. Browse to select the folder from the Repository CD to begin the installation (32bits Located at: E:\Driver\SiI3132\Windows\32bits, and 64bits Located at: E:\Driver\SiI3132\Windows\64bits; PS: "E:" = CD-ROM drive letter).

Update Driver Software - Mass Storage Controller
Browse for driver software on your computer
Search for driver software in this location:
E:\Driver\SiI3132\Windows\32bits
Browse...
Include subfolders
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Next
Cancel

Update Driver Software - Mass Storage Controller
Browse for driver software on your computer
Search for driver software in this location:
E:\Driver\SiI3132\Windows\64bits
Browse...
Include subfolders
Let me pick from a list of device drivers on my computer
This list will show installed driver software compatible with the device, and all driver software in the same category as the device.
Next
Cancel

5. Click **Finish** to complete installation.


Update Driver Software - Silicon Image SiI 3132 SATALink Controller
Windows has successfully updated your driver software
Windows has finished installing the driver software for this device:
Silicon Image SiI 3132 SATALink Controller
Close

3.4.4 MACINTOSH OS TIGER 10.4.X / LEOPARD 10.5.X / SNOW LEOPARD 10.6.X

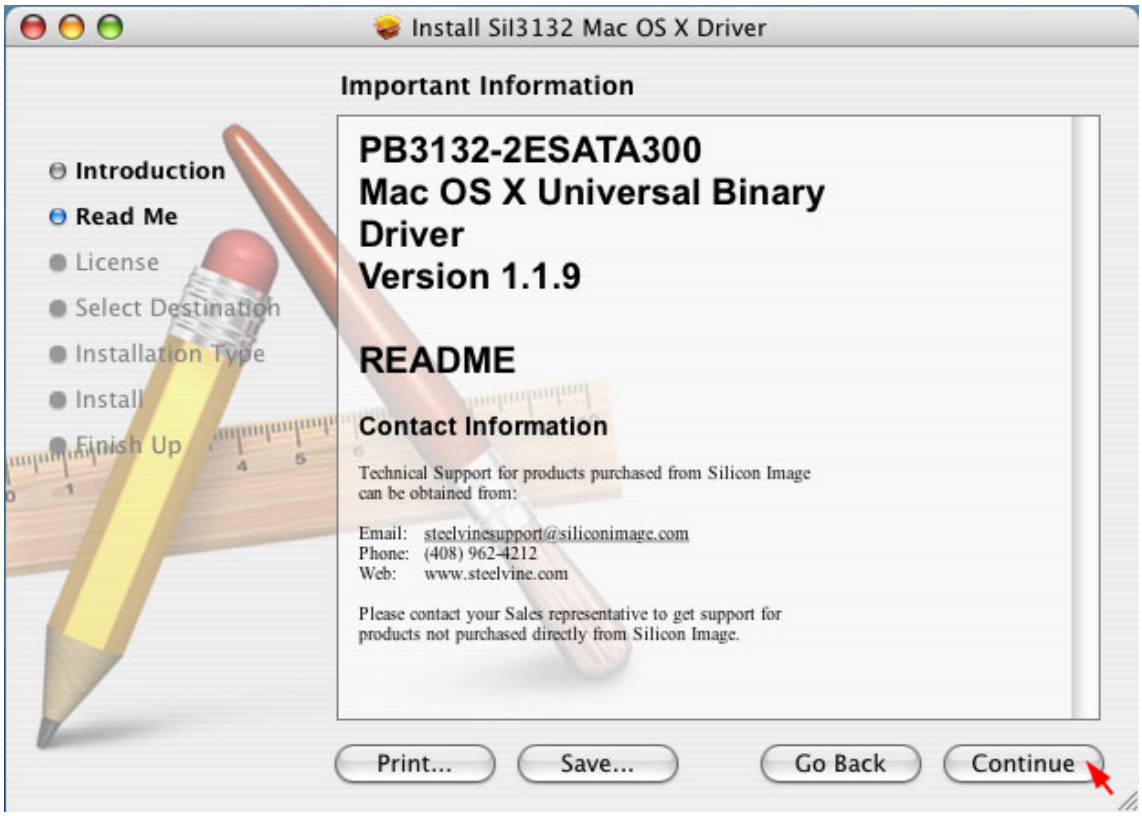
1. Insert the **Setup and Installation Repository Driver CD** in the CD-ROM drive.
2. Double-click on the **Setup and Installation Repository Driver CD** icon.

3. Double-click the **3132-Mac.pkg** file to begin the installation (Located at: E:\Driver\SiI3132\Macintosh\3132-Mac.pkg PS: "E:" = CD-ROM drive letter).

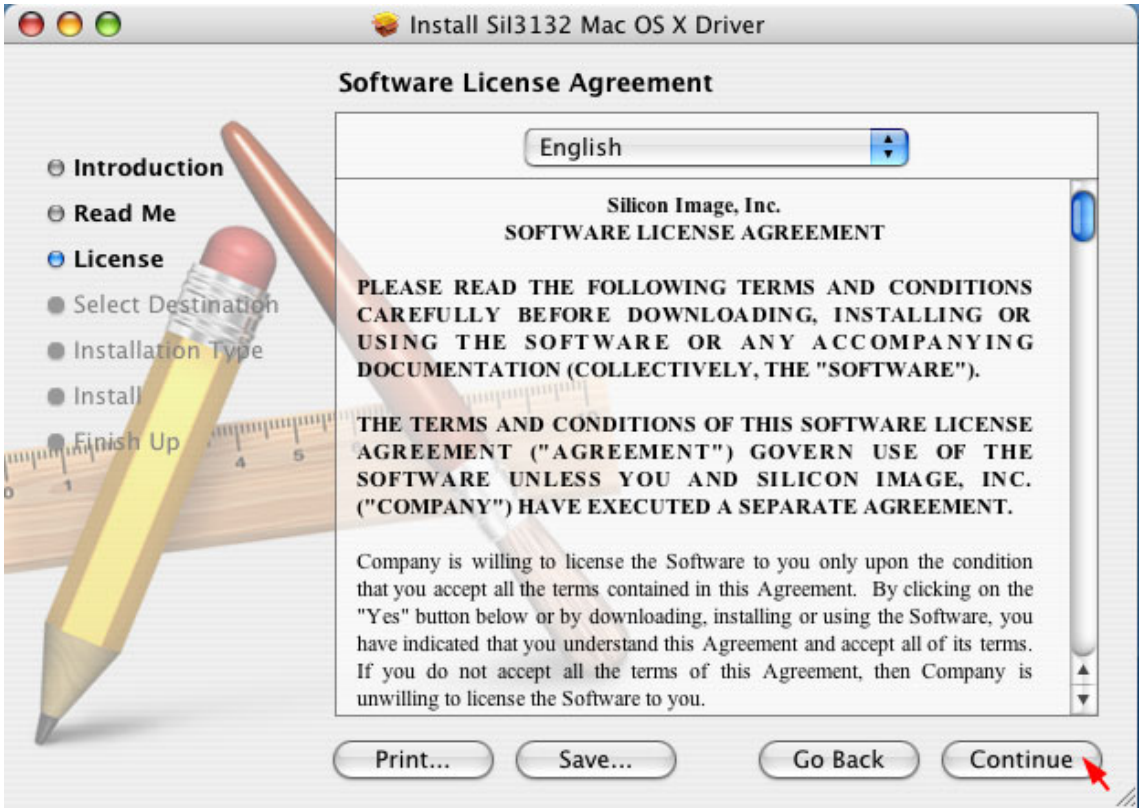
4. Once started, the following dialog screens will appear, Click **Continue**.

Install Sil3132 Mac OS X Driver
Welcome to the Sil3132 Mac OS X Driver Installer
Introduction
Read Me
License
Select Destination
Installation Type
Install
Finish Up
Welcome to the Mac OS X Installation Program. You will be guided through the steps necessary to install this software.
Go Back
Continue

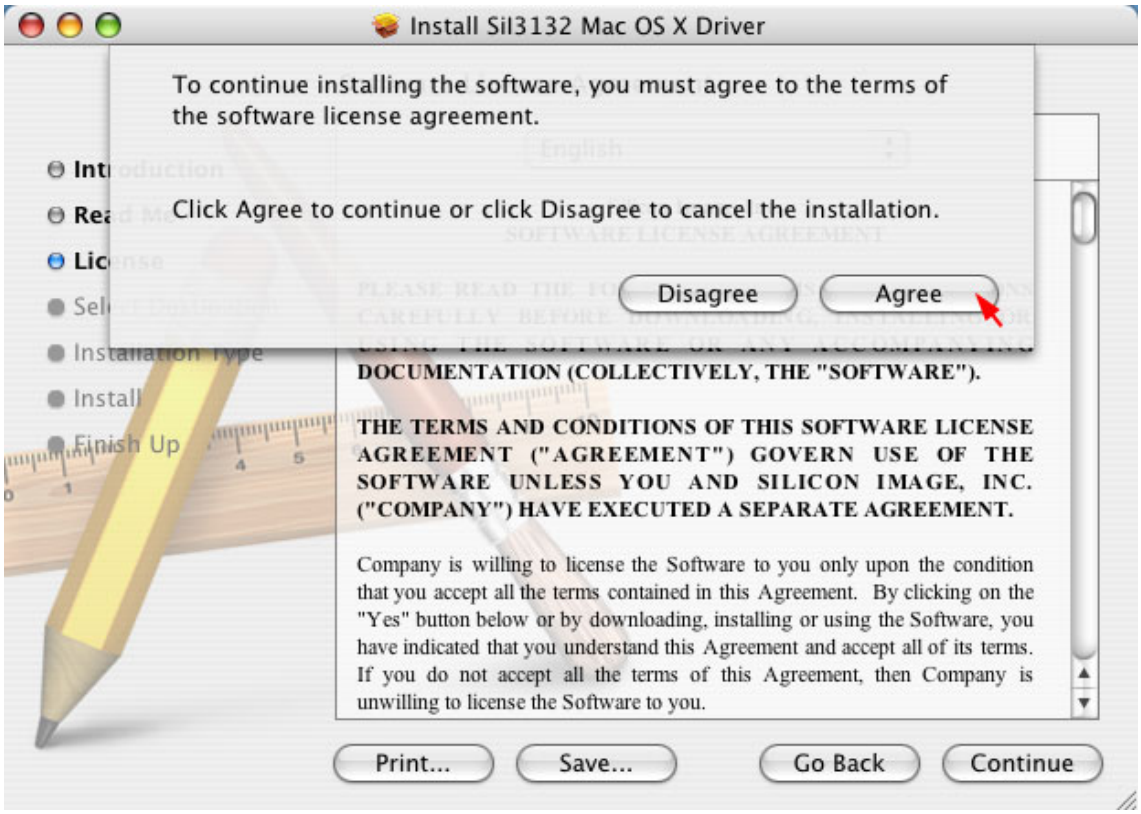
5. Read the **Read Me** file, than click **Continue**.



6. Read the **Software License Agreement**, than click **Continue**.

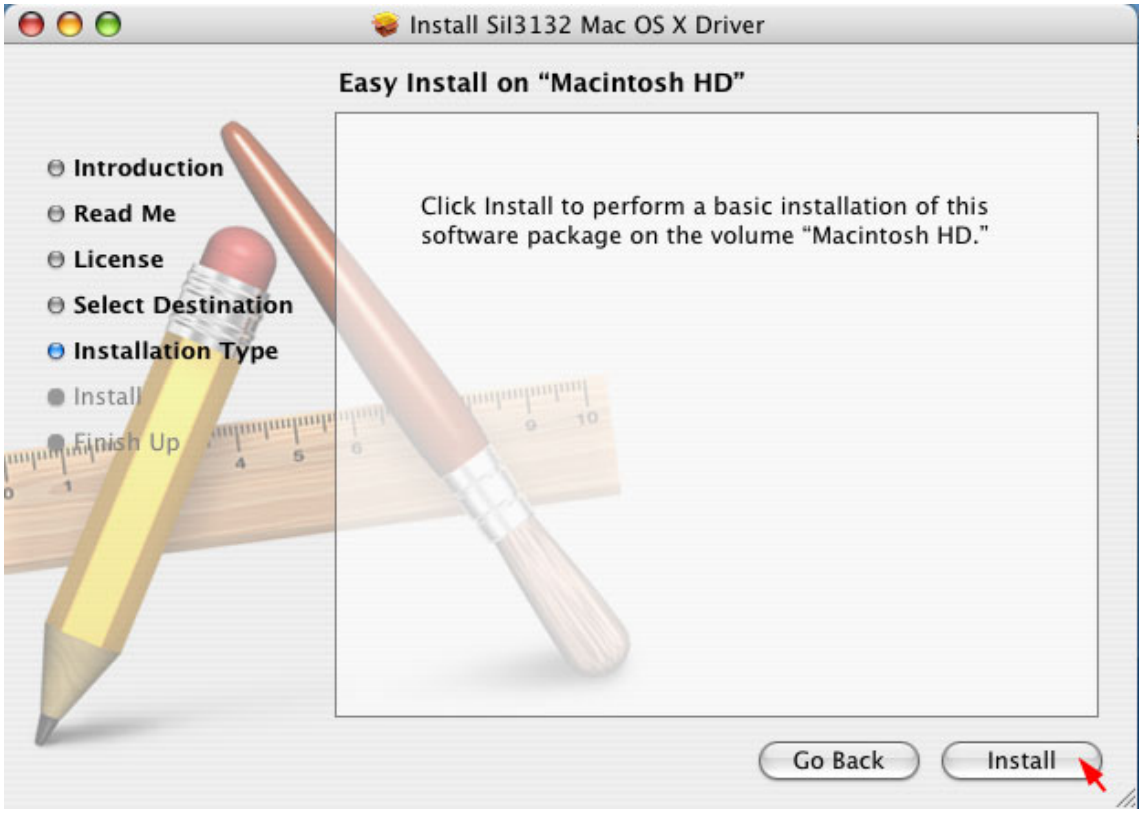

Install Sil3132 Mac OS X Driver
Software License Agreement
Introduction
Read Me
License
Select Destination
Installation Type
Install
Finish Up
English
Silicon Image, Inc.
SOFTWARE LICENSE AGREEMENT
PLEASE READ THE FOLLOWING TERMS AND CONDITIONS CAREFULLY BEFORE DOWNLOADING, INSTALLING OR USING THE SOFTWARE OR ANY ACCOMPANYING DOCUMENTATION (COLLECTIVELY, THE "SOFTWARE").
THE TERMS AND CONDITIONS OF THIS SOFTWARE LICENSE AGREEMENT ("AGREEMENT") GOVERN USE OF THE SOFTWARE UNLESS YOU AND SILICON IMAGE, INC. ("COMPANY") HAVE EXECUTED A SEPARATE AGREEMENT.
Company is willing to license the Software to you only upon the condition that you accept all the terms contained in this Agreement. By clicking on the "Yes" button below or by downloading, installing or using the Software, you have indicated that you understand this Agreement and accept all of its terms. If you do not accept all the terms of this Agreement, then Company is unwilling to license the Software to you.
Print...
Save...
Go Back
Continue

7. Click **Agree** to continue the installation.


Install Sil3132 Mac OS X Driver
To continue installing the software, you must agree to the terms of the software license agreement.
Click Agree to continue or click Disagree to cancel the installation.
Disagree
Agree
DOCUMENTATION (COLLECTIVELY, THE "SOFTWARE").
THE TERMS AND CONDITIONS OF THIS SOFTWARE LICENSE AGREEMENT ("AGREEMENT") GOVERN USE OF THE SOFTWARE UNLESS YOU AND SILICON IMAGE, INC. ("COMPANY") HAVE EXECUTED A SEPARATE AGREEMENT.
Company is willing to license the Software to you only upon the condition that you accept all the terms contained in this Agreement. By clicking on the "Yes" button below or by downloading, installing or using the Software, you have indicated that you understand this Agreement and accept all of its terms. If you do not accept all the terms of this Agreement, then Company is unwilling to license the Software to you.
Print...
Save...
Go Back
Continue

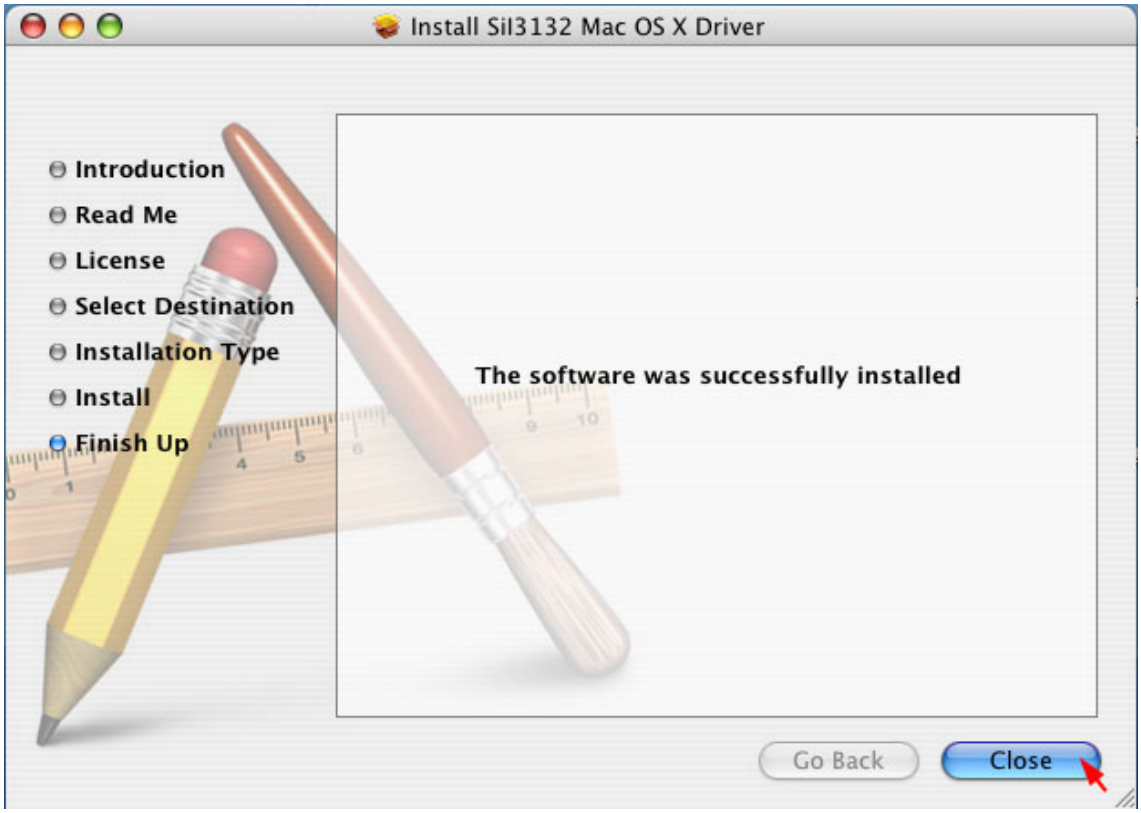
8. Select a destination volume to install the software, than click **Continue**.

9. Click **Install** to begin the installation.



10. Enter the Administrative Password for your system, than click **OK**.

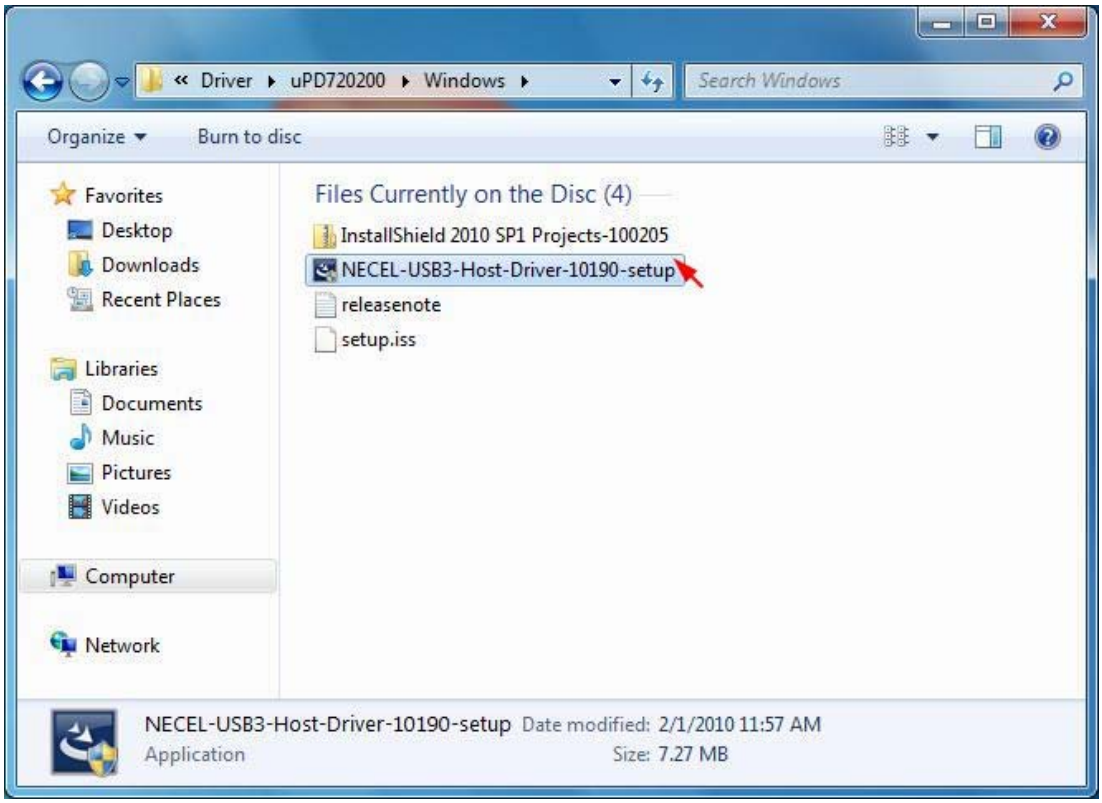
11. Click **Close** to complete the installation.



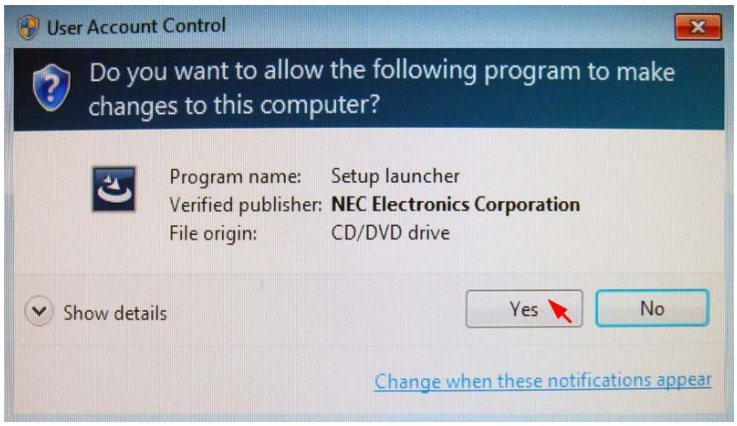
3.5 INSTALLING NH HOST BUS ADAPTER (OPTIONAL)

The *NH* Host Bus Adapter (HBA) is powered by NEC® uPD720200 host controller. It's a Universal Serial Bus (USB) 3.0 host controller which complies with Universal Serial Bus (USB) 3.0 specification, and Intel's eXtensible Host Controller Interface (xHCI). The uPD720200 has PCI Express® bus interface, and it is applicable for PCI Express® solution for host PC system. It works up to 5Gbps for data transfer when connecting to USB3.0 compliant peripherals, while maintaining compatibility with existing USB peripheral devices.

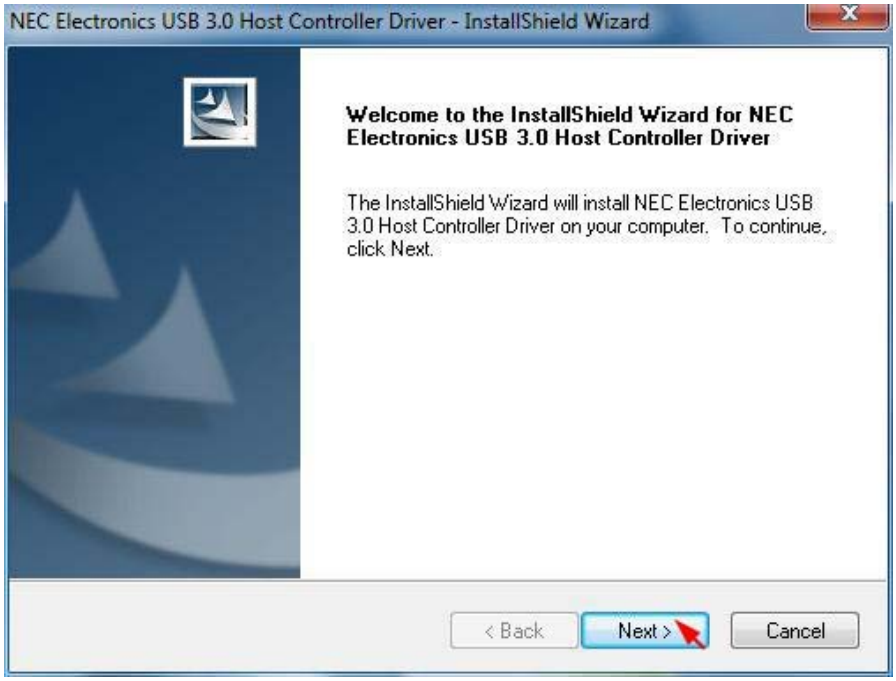
1. Double-click the mouse on the **NECEL-USB3-Host-Driver-10190-Setup** from the Repository CD. (Located at: E:\Driver\uPD720200\Windows PS: "E:" = CD-ROM drive letter)



2. Click **Continue** to permit the device driver software installatiion.


User Account Control
Do you want to allow the following program to make changes to this computer?
Program name: Setup launcher
Verified publisher: NEC Electronics Corporation
File origin: CD/DVD drive
Show details
Yes
No
Change when these notifications appear

3. Click **Next** to continue.


NEC Electronics USB 3.0 Host Controller Driver - InstallShield Wizard
Welcome to the InstallShield Wizard for NEC Electronics USB 3.0 Host Controller Driver
The InstallShield Wizard will install NEC Electronics USB 3.0 Host Controller Driver on your computer. To continue, click Next.
< Back
Next >
Cancel

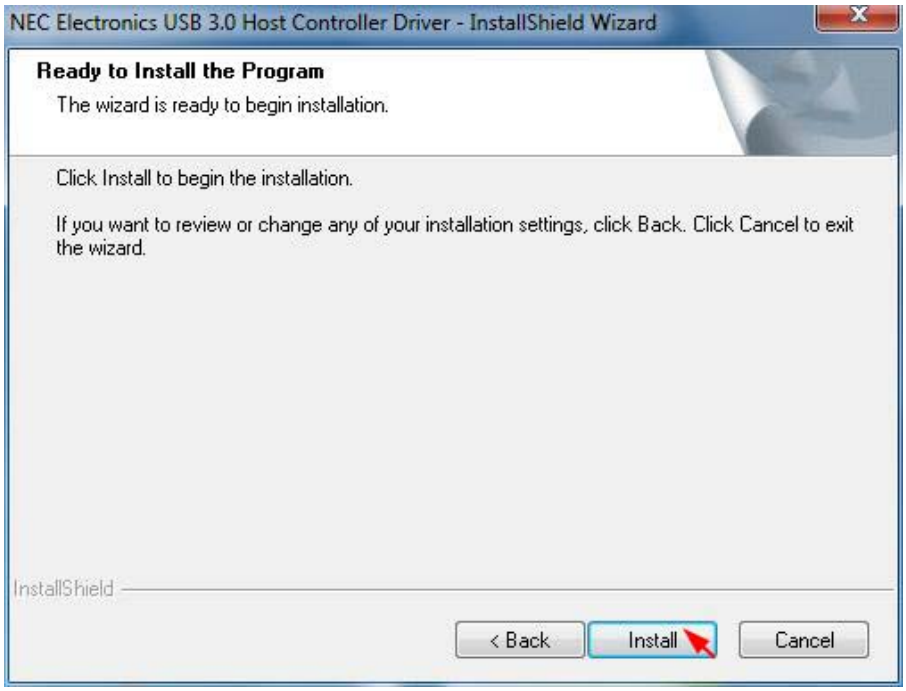
4. Select **I accept the terms of the license agreement**, than click **Next** to continue.

NEC Electronics USB 3.0 Host Controller Driver - InstallShield Wizard
License Agreement
Please read the following license agreement carefully.
End User License Agreement
IMPORTANT - READ CAREFULLY: This End User License Agreement ("EULA") is a legal agreement between you (either an individual or an entity) and NEC Electronics Corporation ("NEC") for USB3.0 Software ("Software").
YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THIS EULA BY INSTALLING, COPYING OR OTHERWISE USING SOFTWARE. IF YOU DO NOT AGREE THE TERMS AND
I accept the terms of the license agreement
I do not accept the terms of the license agreement
Print
InstallShield
< Back
Next >
Cancel

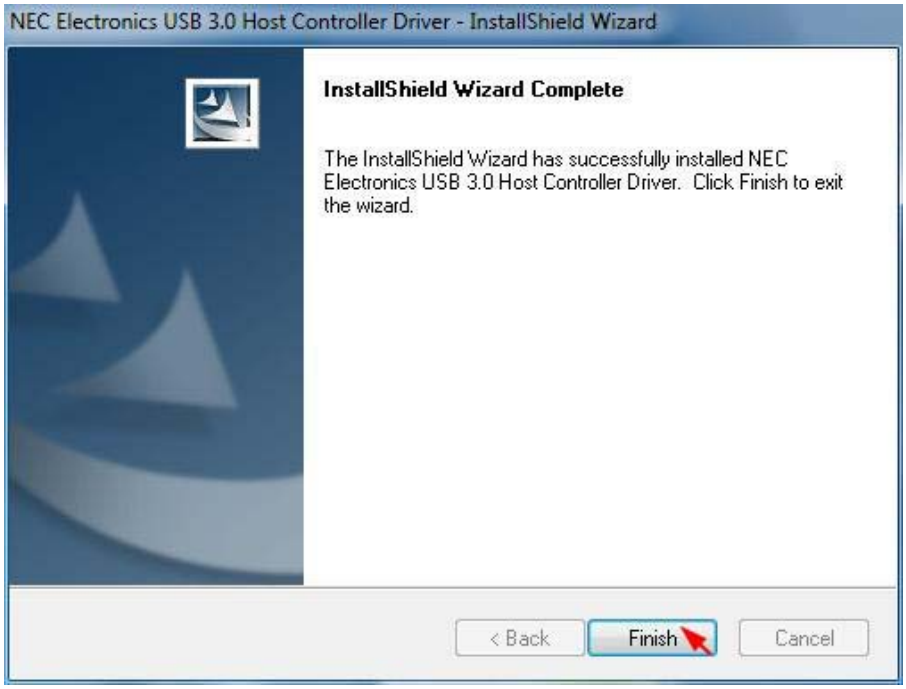
5. Click **Next** to continue.

NEC Electronics USB 3.0 Host Controller Driver - InstallShield Wizard
Choose Destination Location
Select folder where setup will install files.
Setup will install NEC Electronics USB 3.0 Host Controller Driver in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\...\USB 3.0 Host Controller Driver\
Browse...
InstallShield
< Back
Next >
Cancel

6. Click **Install** to continue.


NEC Electronics USB 3.0 Host Controller Driver - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

7. Click **Finish** to complete installation.


NEC Electronics USB 3.0 Host Controller Driver - InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed NEC Electronics USB 3.0 Host Controller Driver. Click Finish to exit the wizard.
< Back
Finish
Cancel

4 CONFIGURATION

4.1 CONFIGURATION PREREQUISITES

4.1.1 SATA HOST CONNECTIONS

This guide assumes that you have already attached the *TEAR TOWER SATA RAID II* to a host computer that has been installed with the EH or NH Host Bus Adapter (HBA) or another third party SATA HBA with Port Multiplier (PM) support.

If you use a host controller that does not provide Port Multiplier support (Such as Intel ICH):

- The CLEAN MODE storage policy is unavailable when configuring the *TEAR TOWER SATA RAID II.* Only one disk is available on the host computer.
- Virtual volumes that you create in the Advanced Configuration Wizard must use at least 8 gigabytes (GB) of available system capacity.

4.1.2 USB HOST CONNECTIONS

If you are connecting your *TEAR TOWER SATA RAID II* using a USB connection to your host, the USB port should be compliant with USB2.0 or 3.0.

4.2 CHANGING HOST CONNECTIONS

The *TEAR TOWER SATA RAID II* supports both USB and eSATA host connections, although only one connection can be attached at any given time. For the best data transfer performance, you should always use the eSATA host connection.

If it becomes necessary to change the host connection between eSATA and USB, the host computer system and the *TEAR TOWER SATA RAID II* should both be powered down prior to making the host connection change to avoid any potential data loss or corruption. After changing the host connection, all items can be powered-up to resume operation with the new host connection.

4.3 DISCONNECTING A USB DEVICE

USB3.0 external devices provide support for “plug & play” connection, so that your USB storage device can be connected and disconnected while the computer is running. To prevent data loss or other failures, you must follow these steps when disconnecting your USB3.0 storage device from your host computer system. Once the physical USB device is disconnected, any volumes that are associated with that device will become unavailable. On O/S (Opration Systems), the *TEAR TOWER SATA RAID II* must be stopped from O/S before any devices can be disconnected.

4.3.1 WINDOWS SYSTEMS

1. Click on the Eject icon (a small green arrow over a hardware image) in the System Tray located in the lower right-hand side of your screen.

2. A message will appear listing all of the devices that the Eject icon controls. Click on the “Safely remove USB Mass Storage Device” item.

3. The following message then appears: “Safe to Remove Hardware”. You can now safely disconnect the device from your computer.

Note: If your host USB adapter does not support this feature, the device should be disabled using the Device Manager or your system should be shut down cleanly and powered off before disconnecting the USB device.

4.3.2 MACINTOSH SYSTEMS

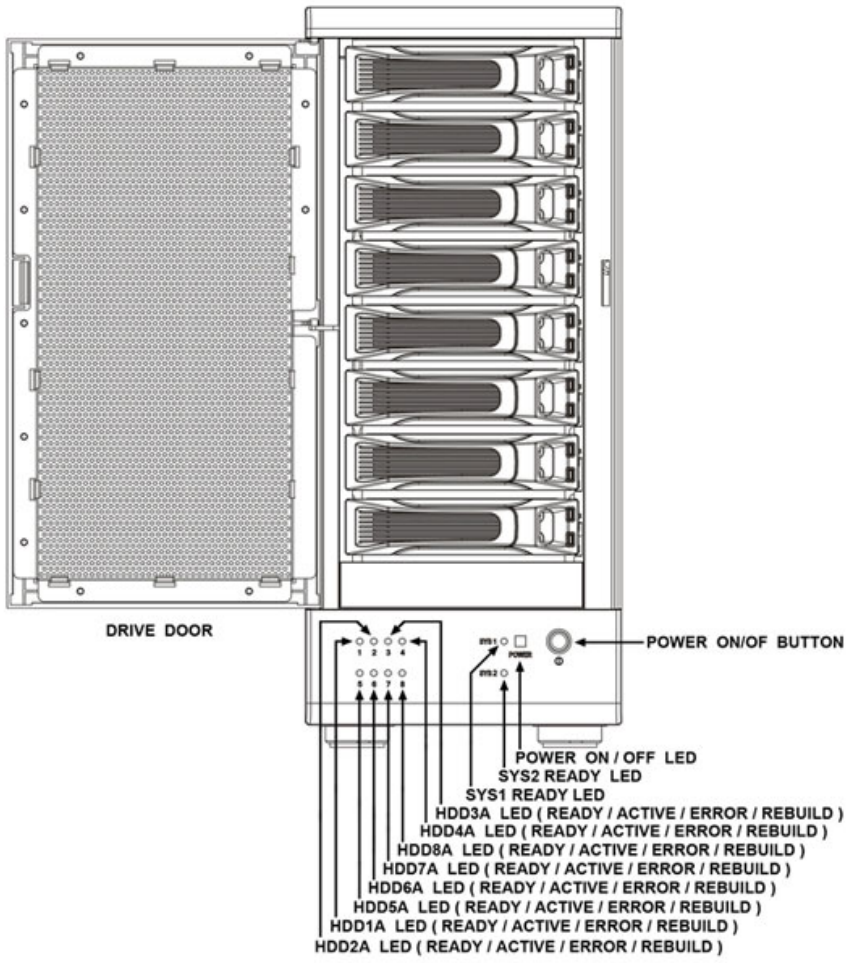
You must un-mount the hard disk drive by dragging the hard drive icon to the trash before disconnecting it or powering it down.

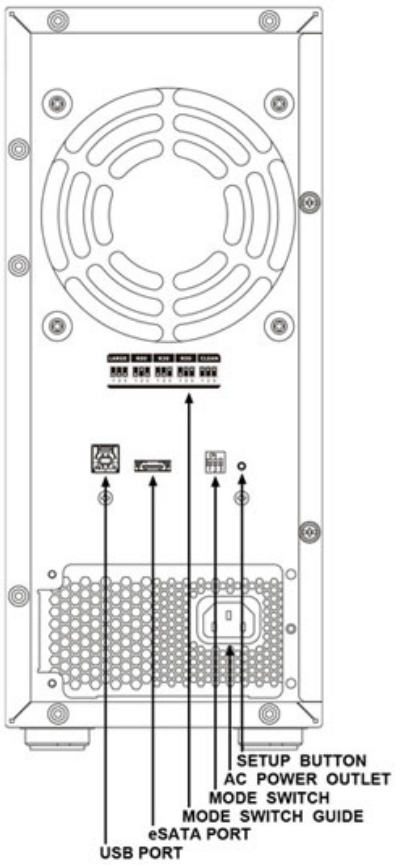
4.4 HARD DISK DRIVE HOT SWAP

The hard disk drives can be hot swaped while the system is running. However, to avoid data corruption or loss, care should be taken to ensure that the host system is not currently using any drive that is about to be hot swaped.

4.5 LED INDICATIVE STATUS

The *TEAR TOWER SATA RAID II* provides information on the SATA HDDs, SYS1, SYS2, and Power LEDs. Each LED activity will turn On/Off the LED for approximately 70 ms. the blinking rate is approximately 400 ms “On” and 400 ms “Off”.


DRIVE DOOR
POWER ON/OF BUTTON
POWER ON / OFF LED
SYS2 READY LED
SYS1 READY LED
HDD3A LED (READY / ACTIVE / ERROR / REBUILD)
HDD4A LED (READY / ACTIVE / ERROR / REBUILD)
HDD8A LED (READY / ACTIVE / ERROR / REBUILD)
HDD7A LED (READY / ACTIVE / ERROR / REBUILD)
HDD6A LED (READY / ACTIVE / ERROR / REBUILD)
HDD5A LED (READY / ACTIVE / ERROR / REBUILD)
HDD1A LED (READY / ACTIVE / ERROR / REBUILD)
HDD2A LED (READY / ACTIVE / ERROR / REBUILD)



4.5.1 POWER LED

The *TEAR TOWER SATA RAID II* has one Amber color Power LED. The table shows Power LED function and operation.

DESCRIPTION	Amber LED
Power On	On
Power Off	Off

4.5.2 SYSTEM LED

The *TEAR TOWER SATA RAID II* has Green color SYS1 and SYS2 LEDs. The table shows he system LEDs function and operation.

DESCRIPTION	GREEN LED
SYS1 or SYS2 Not Ready / No Power	Off
SYS1 or SYS2 Ready (Idle)	On
SYS1 or SYS2 Ready (Active)	On

4.5.3 HRAD DISK DRIVE LED

The *TEAR TOWER SATA RAID II* has 8 HDD LEDs (Green and Red) on the front panel, and 2 green LEDs on each HDD tray. The table shows HDD LED function and operation. These front panel LEDs behave as follows:

DESCRIPTION	GREEN LED	RED LED
HDD Unplugged / No Power	Off	Off
HDD plugged (Idle)	On	Off
HDD plugged (Active)	Blink (On)	Off
Error State (One or More Bad Partial Volumes)	Off	On
HDD Rebuild (A Physical Partition is being Rebuild; i.e. Mirroring Mode)	Off	Blink (On)

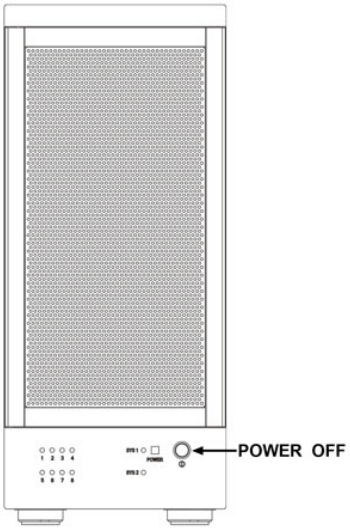
4.6 MODE SETTING

The *TEAR TOWER SATA RAID II* with the device's LEDs to indicate status. To select a storage policy in this mode the first time that a new factory-shipped product is used, ensure that the hard disk drives are installed; turn off the power before set the MODE SWITCH on the back of the *TEAR TOWER SATA RAID II* to the desired Storage Policy. To change the storage policy thereafter, set the MODE SWITCH to the desired position and press and hold the recessed SETUP BUTTON, than power on to create the new virtual volume(s). Creating new virtual volumes will destroy any existing data that existed on the previous volume.

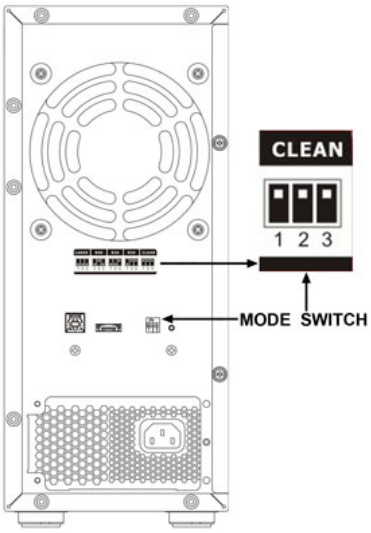
Note: Before reconfiguring a volume, back up your data and delete previously defined partitions.

4.6.1 CLEAN MODE

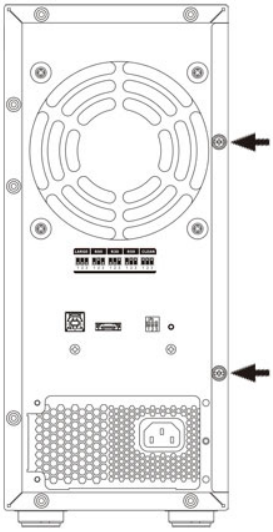
1. Turn off the power.



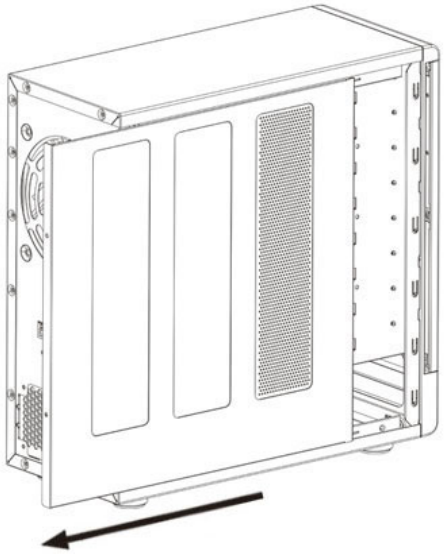
2. Set the MODE SWITCH position to CLEAN MODE.



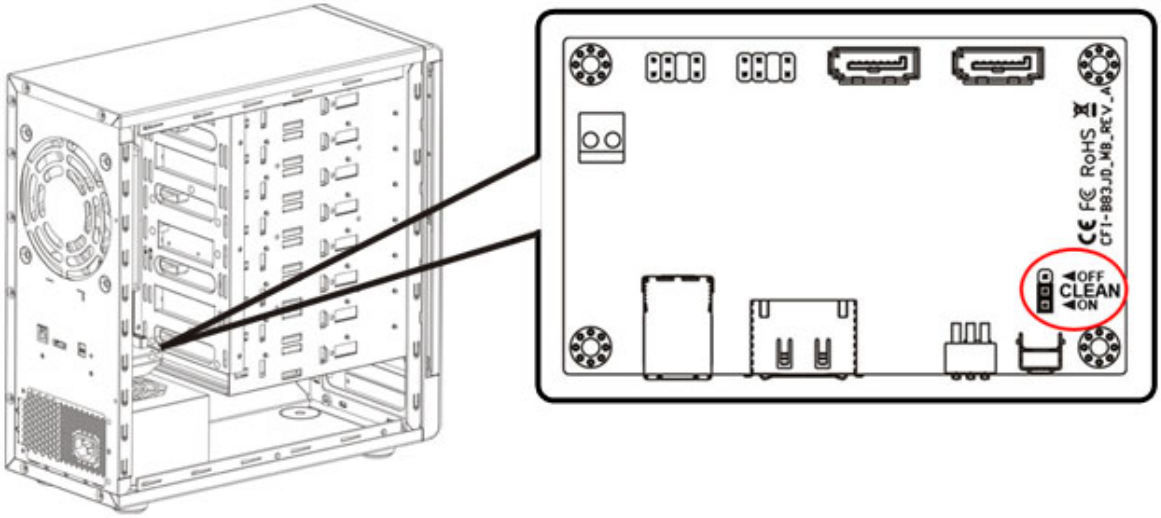
3. Unfasten the Tool-less screws on the back panel.



4. Remove the side chassis cover backwards.

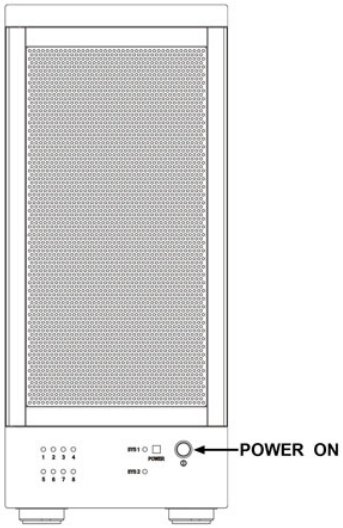


5. Set the CLEAN MODE jumper to ON position.



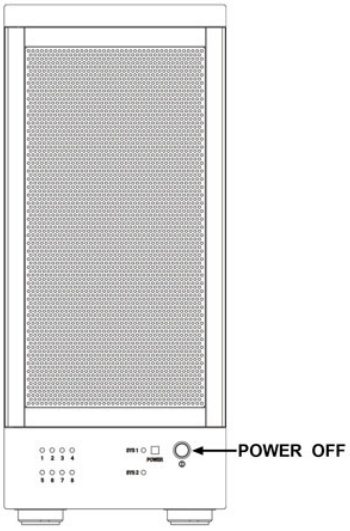
Warning: Unless CLEAN MODE in use, the CLEAN MODE jumper must be OFF at all time.

6. Turn on the power to complete mode setting.

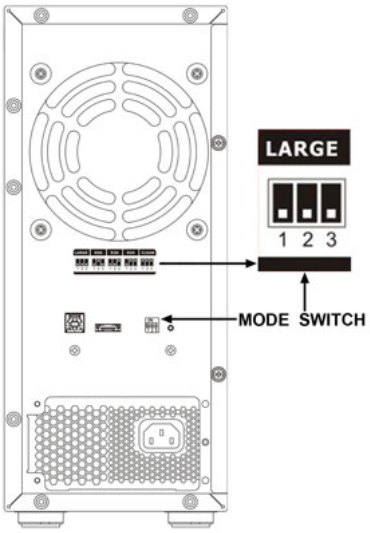


4.6.2 LARGE MODE

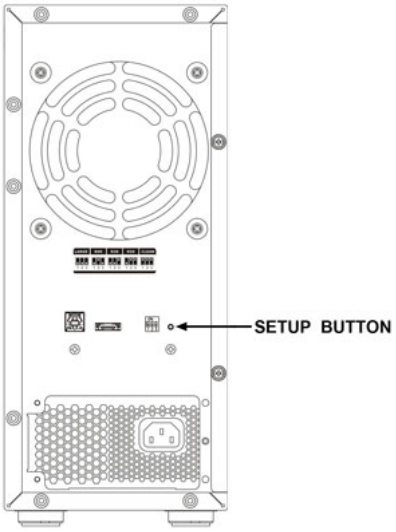
1. Turn off the power.



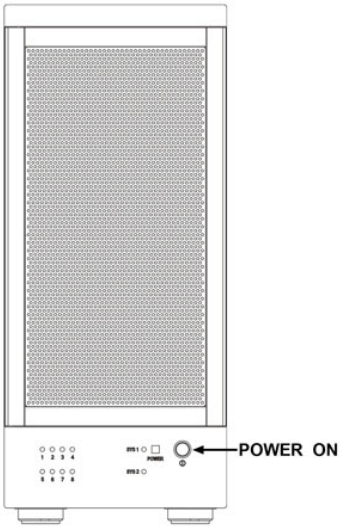
2. Set the MODE SWITCH position to LARGE MODE.



3. Press and hold the recessed SETUP BUTTON.

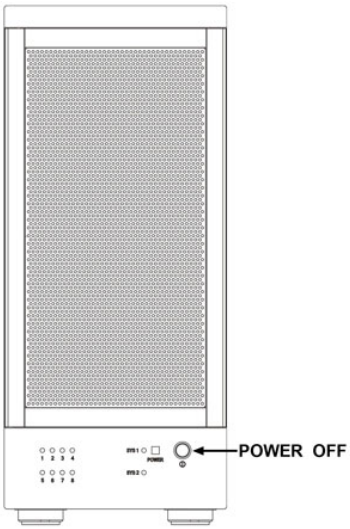


4. Turn on the power, and then release the SETUP BUTTON to complete mode setting.

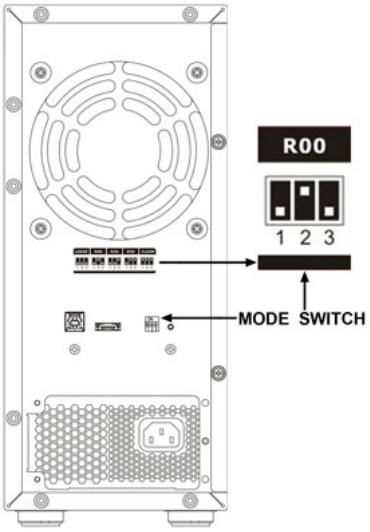


4.6.3 R00 MODE

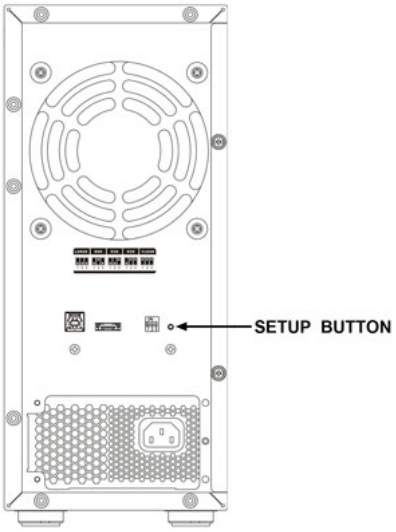
1. Turn off the power.



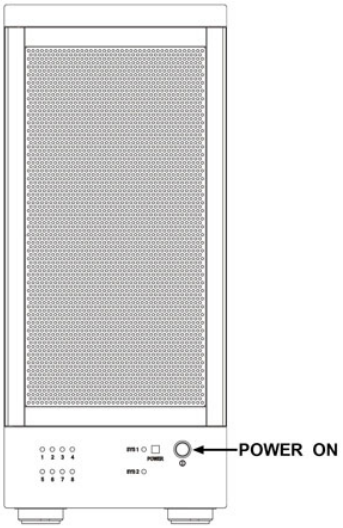
2. Set the MODE SWITCH position to R00 MODE.



3. Press and hold the recessed SETUP BUTTON.

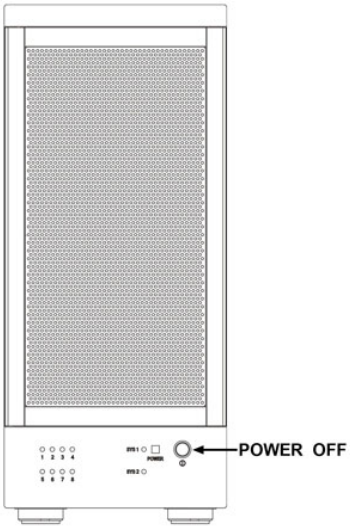


4. Turn on the power, and then release the SETUP BUTTON to complete mode setting.

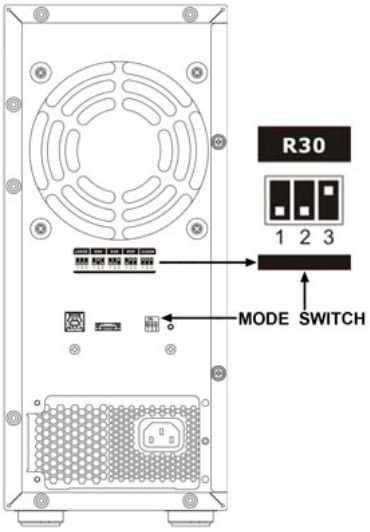


4.6.4 R30 MODE

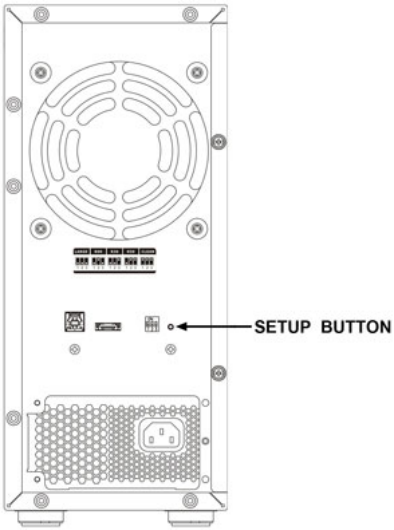
1. Turn off the power.



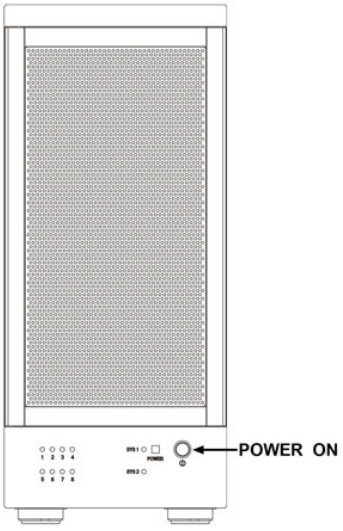
2. Set the MODE SWITCH position to R30 MODE.



3. Press and hold the recessed SETUP BUTTON.

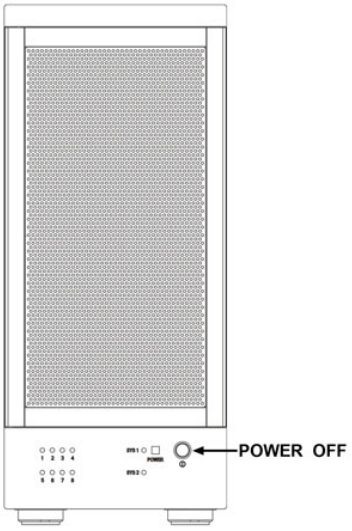


4. Turn on the power, and then release the SETUP BUTTON to complete mode setting.

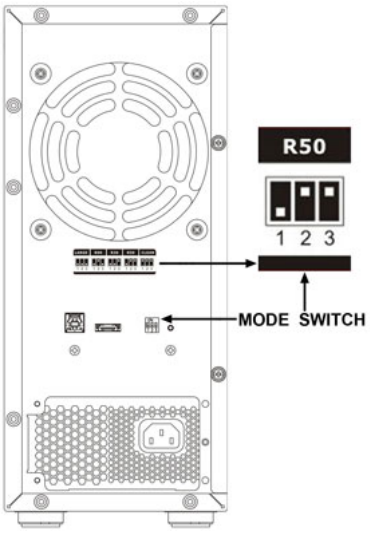


4.6.5 R50 MODE

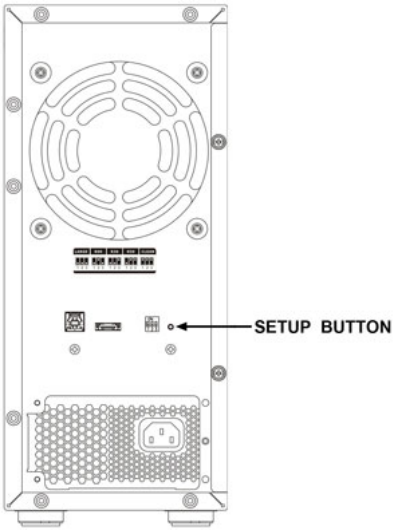
1. Turn off the power.



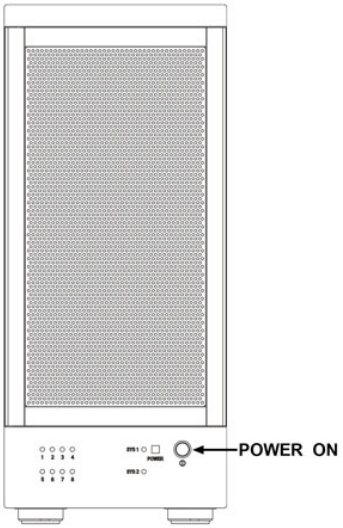
2. Set the MODE SWITCH position to R50 MODE.



3. Press and hold the recessed SETUP BUTTON.



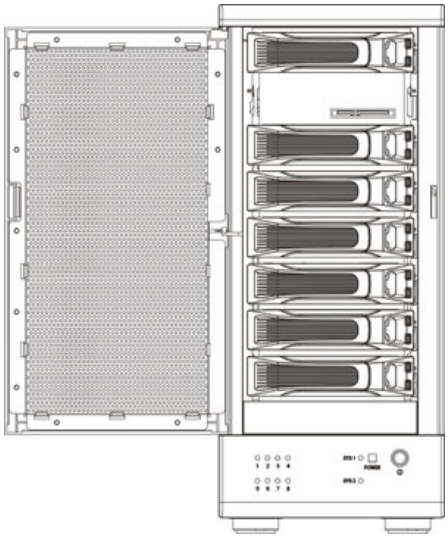
4. Turn on the power, and then release the SETUP BUTTON to complete mode setting.



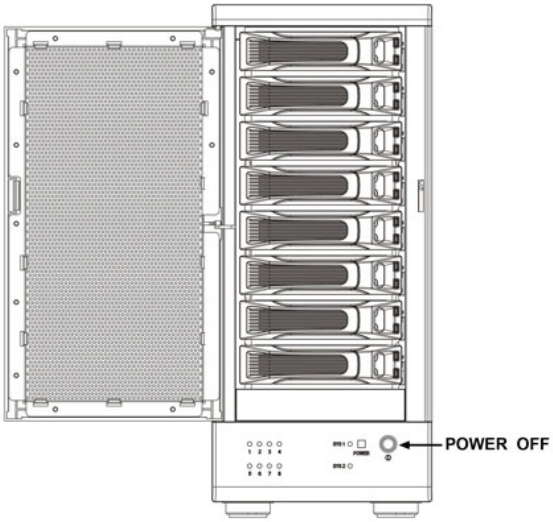
4.7 REBUILDING A REDUNDANCY DRIVE

The *TEAR TOWER SATA RAID II* storage appliance stores all data in duplicate on separate drives to protect against data loss due to drive failure on R30, and R50 MODE. The following example illustrates how the procedure to rebuilding a redundancy or hot spare drive.

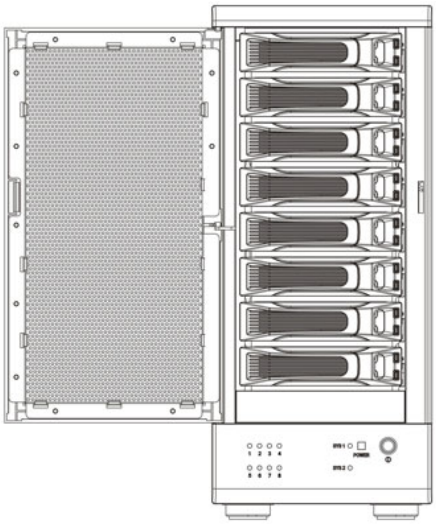
1. If the drive 2 has breakdown, please remove the breakdown drive 2.



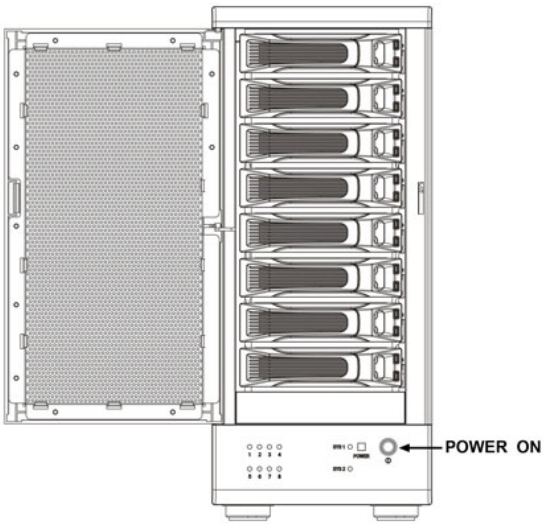
2. Turn off the power.



3. Replace a same or larger size of hard disk drive.



4. Turn on the power.



5. The *TEAR TOWER SATA RAID II* storage appliance will rebuild the virtual volume from degrade mode to normal automatically (Approximately 200GB/hour).

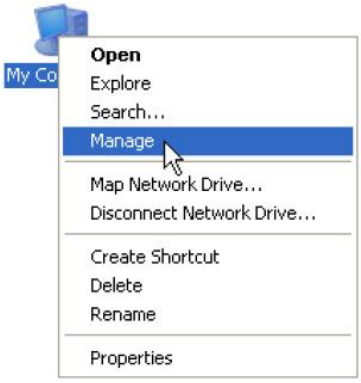
5 PARTITIONING VOLUMES

5.1 PARTITION A VOLUME

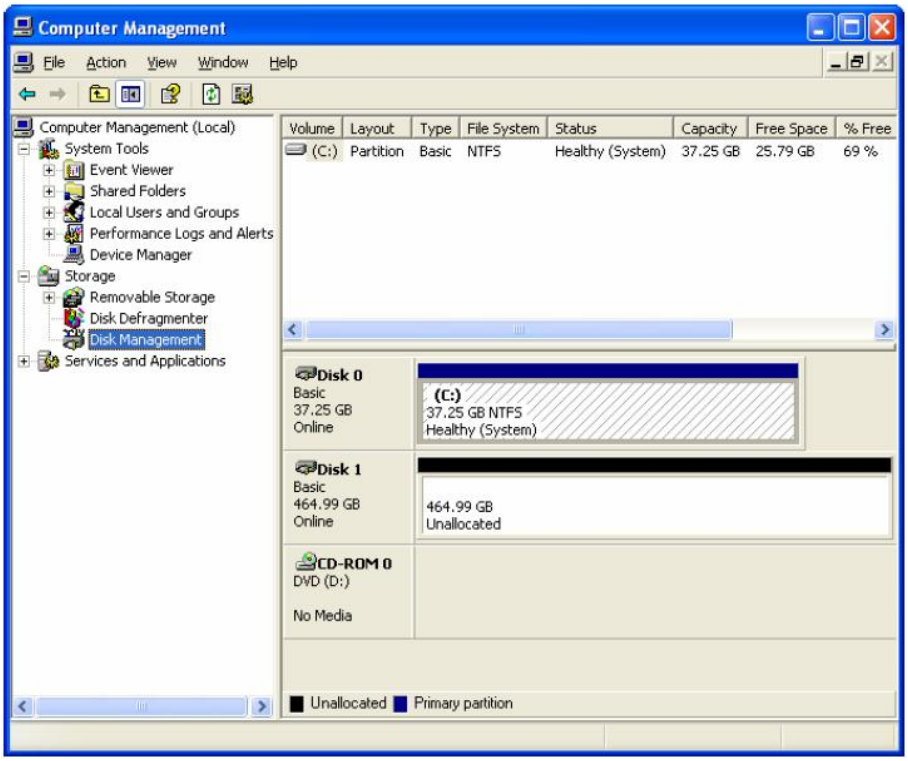
5.1.1 WINDOWS SYSTEMS

Note: Before repartition a volume, back up your data and delete previously defined partitions.

1. Right-click the **My Computer** icon on your desktop and select **Manage** from the pop-up window.



2. Select **Disk Management** under **Storage** to open the Windows Disk Manager. This example illustrates the **LARGE** storage policy, which concatenates the capacity of all hard drives connected to the *TEAR TOWER SATA RAID II*.



Every disk should appear with the word "**Basic"**, a size value that shows the available storage capacity, and a status of "**Online**". Instead of **Basic**, a disk could appear **Unknown**, **Dynamic**, or **Not Initialized**.

If the disk appears as "**Unknown**", right-click the disk icon and select **Write Signature**. A window

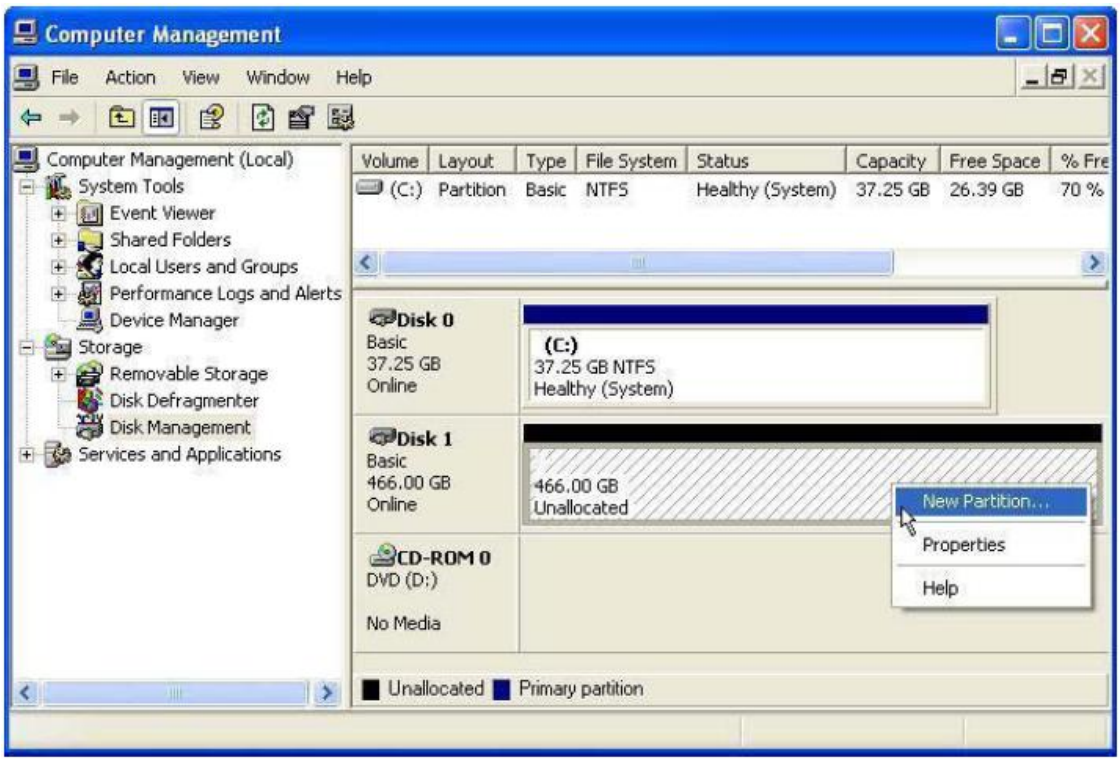
opens with the selected disk (all Unknown disks may appear in this window). Make sure the box next to each disk is checked and click **OK**. The disk should now be marked as a **Basic** disk.

If a disk appears as "**Dynamic**", right-click the disk icon, and select **Revert to Basic Disk**. Within a few seconds, the disk should be marked as a **Basic** disk.

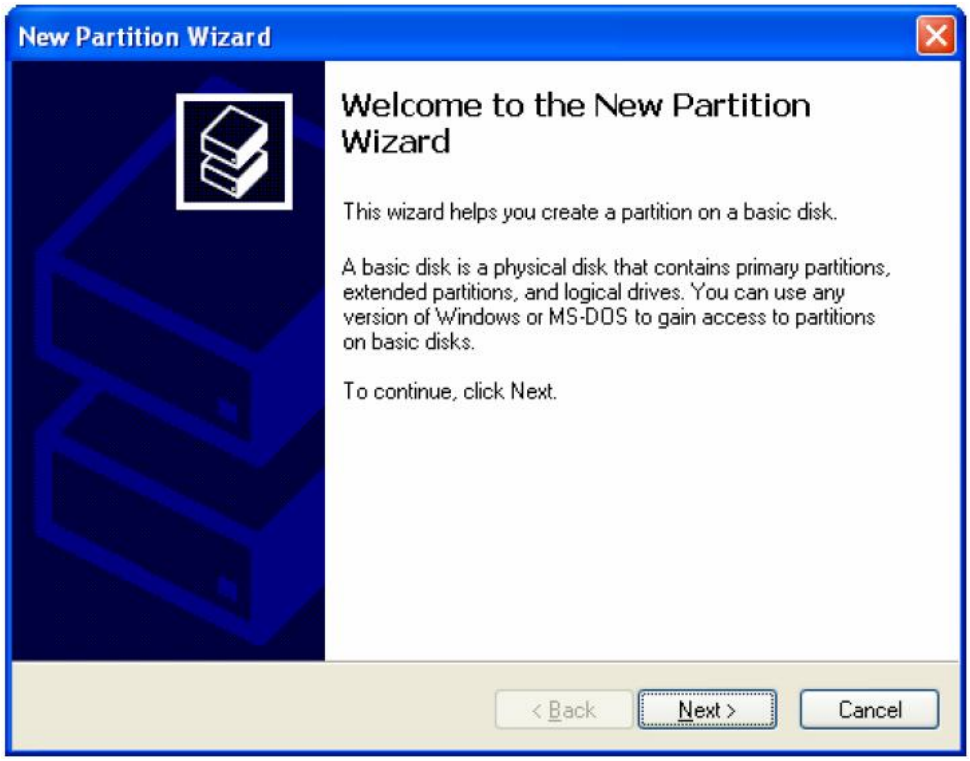
If a disk is marked "**Not Initialized**", right-click the disk icon and select **Initialize Disk**. An additional dialog box appears allowing you to select which disks to initialize. Uncheck the SteelVine Processor Disk item and click **OK**. Within a few seconds, the selected disk(s) should be marked as a **Basic** disk.

Note: *Be sure that you select the correct disk based on the expected disk capacity to create a partition.*

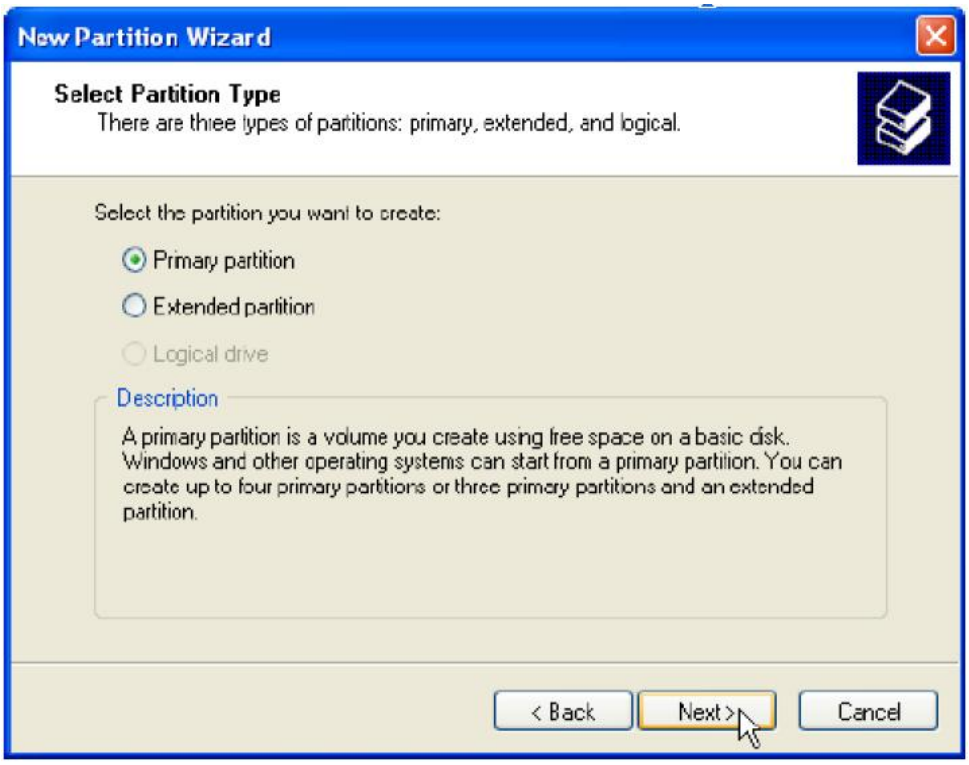
3. Right-click the configured disk's unallocated space and select **New Partition**. If the New Partition option is not available, select the disk and initialize it first. To do this, right-click on the disk item and select "Initialize Disk".



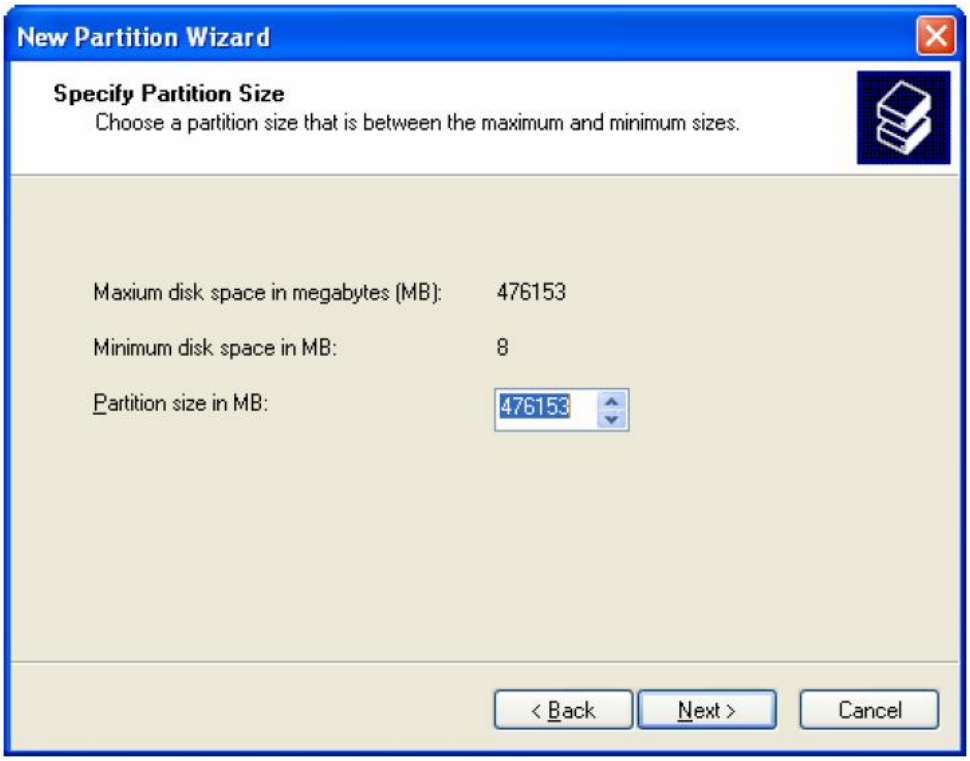
4. Click **Next** to start the Partition Wizard.


New Partition Wizard
Welcome to the New Partition Wizard
This wizard helps you create a partition on a basic disk.
A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. You can use any version of Windows or MS-DOS to gain access to partitions on basic disks.
To continue, click Next.
< Back
Next >
Cancel

5. Select the Primary or Extended option and click **Next**.


New Partition Wizard
Select Partition Type
There are three types of partitions: primary, extended, and logical.
Select the partition you want to create:
Primary partition
Extended partition
Logical drive
Description
A primary partition is a volume you create using free space on a basic disk. Windows and other operating systems can start from a primary partition. You can create up to four primary partitions or three primary partitions and an extended partition.
< Back
Next >
Cancel

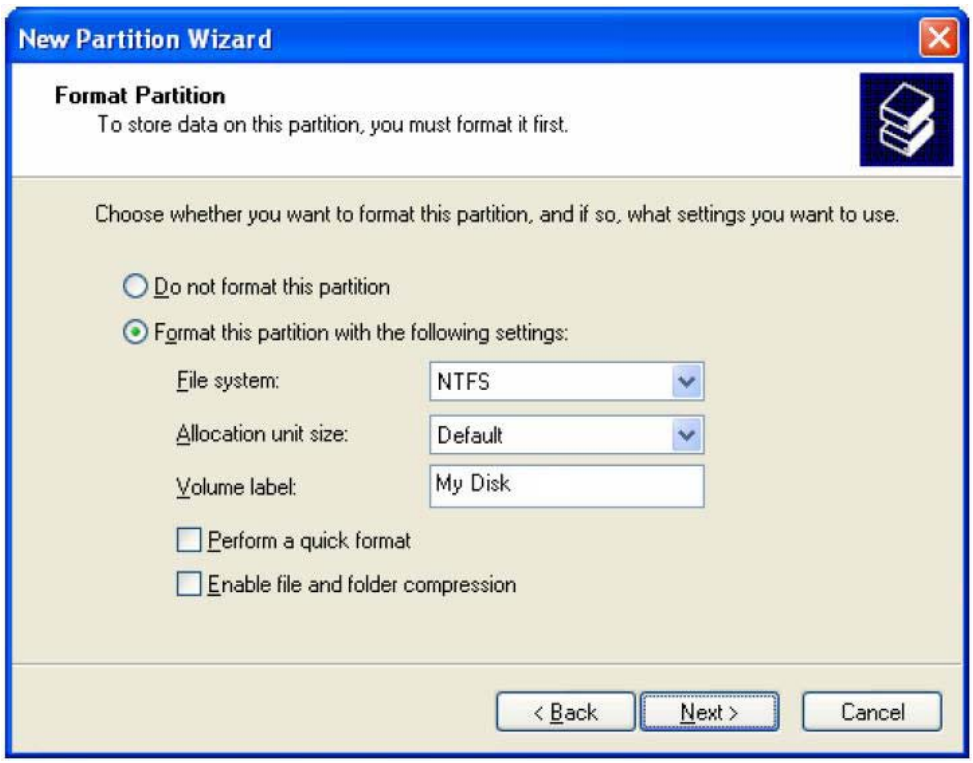
6. Specify the partition size. By default, the partition occupies the entire volume. Click **Next**.


New Partition Wizard
Specify Partition Size
Choose a partition size that is between the maximum and minimum sizes.
Maxium disk space in megabytes (MB): 476153
Minimum disk space in MB: 8
Partition size in MB: 476153
< Back
Next >
Cancel

7. Assign a drive letter or mount path and click **Next**.

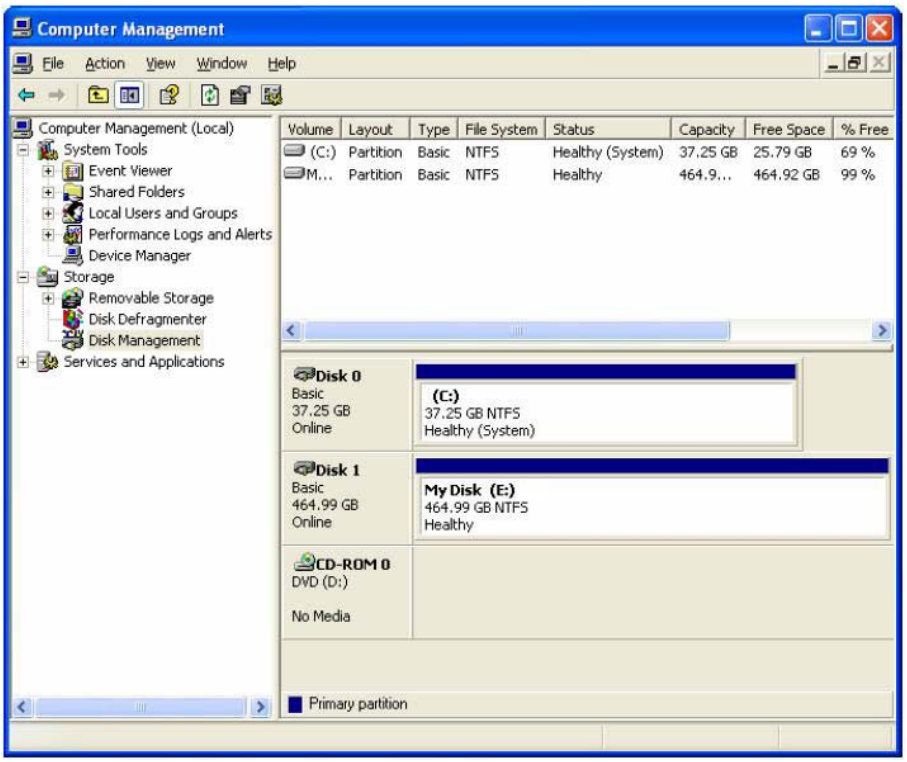
New Partition Wizard
Assign Drive Letter or Path
For easier access, you can assign a drive letter or drive path to your partition.
Assign the following drive letter:
E
Mount in the following empty NTFS folder:
Browse...
Do not assign a drive letter or drive path
< Back
Next >
Cancel

8. Name and format the partition and click **Next**.


New Partition Wizard
Format Partition
To store data on this partition, you must format it first.
Choose whether you want to format this partition, and if so, what settings you want to use.
Do not format this partition
Format this partition with the following settings:
File system:
NTFS
Allocation unit size:
Default
Volume label:
My Disk
Perform a quick format
Enable file and folder compression
< Back
Next >
Cancel

9. Review the file system settings and click **Finish** to create the logical partition.

10. Repeat steps 1 through 9 to partition any remaining disks.

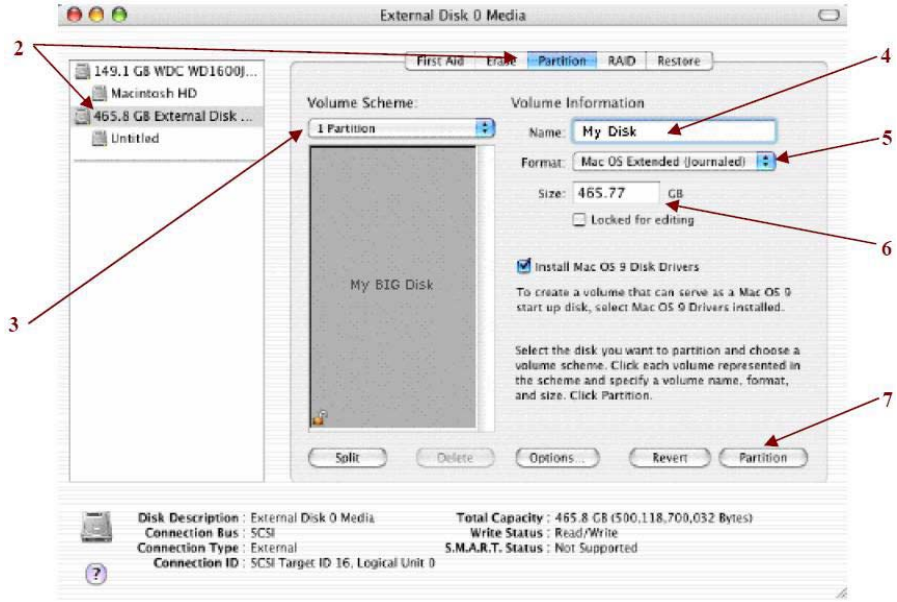


5.1.2 MACINTOSH SYSTEMS

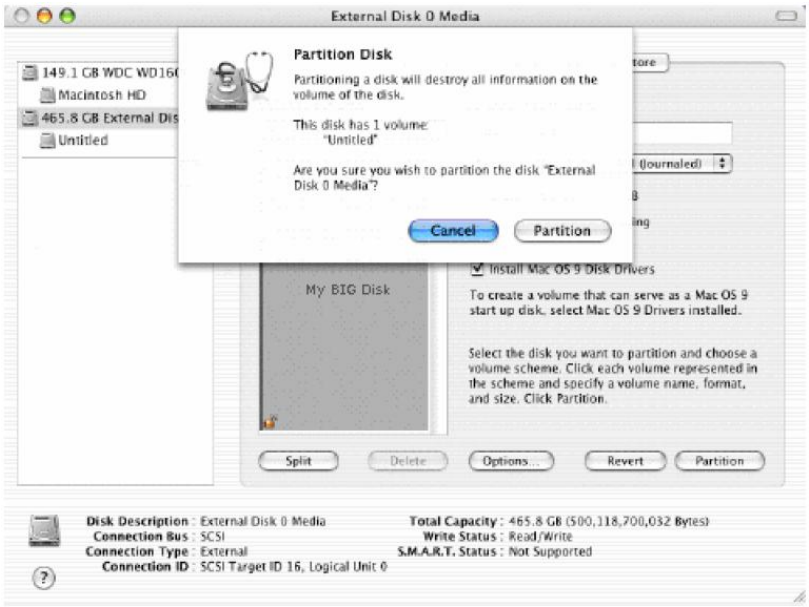
Note: Before reconfiguring a volume, back up your data and drag the old drive to the trash to un-mount previously partition. After you configure and partition the new volumes, restore the backed-up data to the new configuration.

1. Launch **Disk Utility** from the **Application > Utilities** folder.

2. Select a configured disk and click the Partition tab. This procedure illustrates the **LARGE** Storage Policy configuration, which concatenates the capacity of all hard drives connected to the *TEAR TOWER SATA RAID II*.



3. Select **1 Partition** from the **Volume Scheme** drop-down list.
4. Enter a name for the volume in the **Name** field (such as “My Disk”.)
5. Select **Mac OS Extended (journaled)** from the **Format** drop-down list.
6. Specify the size of the partition in the **Size** field.
7. Click the **Partition** button.
8. Click **Partition** to acknowledge the warning.


External Disk 0 Media
Partition Disk
Partitioning a disk will destroy all information on the volume of the disk.
This disk has 1 volume:
"Untitled"
Are you sure you wish to partition the disk "External Disk 0 Media"?
Cancel
Partition
149.1 GB WDC WD16
Macintosh HD
465.8 GB External Dis
Untitled
My BIG Disk
Install Mac OS 9 Disk Drivers
To create a volume that can serve as a Mac OS 9 start up disk, select Mac OS 9 Drivers installed.
Select the disk you want to partition and choose a volume scheme. Click each volume represented in the scheme and specify a volume name, format, and size. Click Partition.
Split
Delete
Options...
Revert
Partition
Disk Description : External Disk 0 Media
Connection Bus : SCSI
Connection Type : External
Connection ID : SCSI Target ID 16, Logical Unit 0
Total Capacity : 465.8 GB (500,118,700,032 Bytes)
Write Status : Read/Write
S.M.A.R.T. Status : Not Supported

Disk Utility mounts the created partition and represents it with an icon on the desktop. The icon is labeled with the partition name.

9. Repeat steps 1 through 8 to partition any remaining disks you configured.

6 APPENDIX

6.1 FAQ

If you need some help for troubleshooting, please check the frequently asked question below, it may help you problem solved quickly

- **Can not recognize**
  - · Make sure all cables have been connected properly.
- **Can not operate in O/S**
  - · Make sure the O/S is support for the product.
- **Transmission speed is slow**
  - · If connect USB1.0 interface, the speed will be around 1.5Mb/sec only.
- **When format in the Windows XP/ Vista/ 7, the dialog box appear "Unfinished formatting"**
  - · Windows XP/ Vista/ 7 can not format HDD over 32GB by FAT32, Please format by NTFS.
- **When using different capacity or brand HDD, can we still using LARGE mode？**
  - · Yes.
- **When system is damaging on LARGE mode, is it possible to keep the data?**
  - · No. The system is different with RAID; the entire disk can not be read.

6.2 HARD DISK DRIVE COMPATIBILITY LIST

The *TEAR TOWER SATA RAID II* Storage Appliance has been tested compatibility with a range of drive manufacturer and size. The table is updated as new disk drives are certified for compatibility. Only disk drives included in this table are supported.

Model	Manufacturer	Capacity	Family	Part Number	Firmware
TERATOWER SATARAID II	Fujitsu 2.5"	320GB	N/A	MH2232DBH	00000009
TERATOWER SATARAID II	Fujitsu 2.5"	160GB	N/A	MHW2160BH	00000009
TERATOWER SATARAID II	Fujitsu 2.5"	160GB	N/A	MHZ2160BH	00000009
TERATOWER SATARAID II	Fujitsu 2.5"	120GB	N/A	MHY2120BH	0000000B
TERATOWER SATARAID II	Fujitsu 2.5"	80GB	N/A	6D005	00000028
TERATOWER SATARAID II	Fujitsu 2.5"	60GB	N/A	MHY2060BH	0000000B
TERATOWER SATARAID II	Hitachi	1000GB	Deskstar™ 7K1000	HDS721010KLA330	GKA0AB0A
TERATOWER SATARAID II	Hitachi	500GB	Deskstar™ P7K500	HDP725050GLA360	GMOA52A
TERATOWER SATARAID II	Hitachi	500GB	Deskstar™ P7K500	HDP725025GLA360	GM40A52A
TERATOWER SATARAID II	Hitachi	500GB	N/A	HDT725025VL360	V560A52A
TERATOWER SATARAID II	Hitachi	320GB	Deskstar™ P7K500	HDT725032VLA360	R22L9YDN
TERATOWER SATARAID II	Hitachi	320GB	Deskstar™ P7K500	HDP725032GLA360	GM30A52A
TERATOWER SATARAID II	Hitachi	320GB	Travelstar™ 5K320	HTS543232L9A300	FB40L40C
TERATOWER SATARAID II	Hitachi	250GB	Deskstar™ P7K250	HDP725025GLA380	GM2OA52A

Model	Manufacturer	Capacity	Family	Part Number	Firmware
TERATOWER SATARAID II	Hitachi	250GB	Deskstar™ T7K250	HDT722525DLA380	V44OA9BA
TERATOWER SATARAID II	Hitachi	250GB	Deskstar™ 7K250	HTS54252K9SA00	BBFOC31P
TERATOWER SATARAID II	Hitachi	160GB	Deskstar™ 7K80	HDS72180PLA380	P22OABEA
TERATOWER SATARAID II	Hitachi	160GB	Deskstar™ 7K160	HDS721616PLAT80	P22OABEA
TERATOWER SATARAID II	Hitachi	80GB	Deskstar™ 7K160	HDS721680PLA380	P210A70A
TERATOWER SATARAID II	Hitachi	80GB	Travelstar ™ 5K100	HTS541080G9SA00	MB40C60R
TERATOWER SATARAID II	Hitachi	80GB	N/A	HDD725050GLA360	GM40A50E
TERATOWER SATARAID II	Hitachi 2.5”	100GB	Deskstar™ 7K200	HTS722010K9SA00	DC20C76A
TERATOWER SATARAID II	Maxtor	750GB	DiamondMax® 22	STM3756330AS	MX15
TERATOWER SATARAID II	Maxtor	500GB	DiamondMax® 22	STM3500320AS	MX15
TERATOWER SATARAID II	Maxtor	320GB	DiamondMax® 21	STM3320620AS	3.AAE
TERATOWER SATARAID II	Maxtor	300GB	DiamondMax® 10	6L300S0	BANC1G10
TERATOWER SATARAID II	Maxtor	250GB	DiamondMax® 21	STM3250310AS	3.AAF
TERATOWER SATARAID II	Maxtor	250GB	DiamondMax® 10	6V250F0	VA222900
TERATOWER SATARAID II	Maxtor	250GB	MaxLine® III	7V250F0	VA111670
TERATOWER SATARAID II	Maxtor	200GB	DiamondMax® 10	6V200E0	VA111900
TERATOWER SATARAID II	Maxtor	160GB	DiamondMax® 21	STM3160815AS	4.AAB
TERATOWER SATARAID II	Maxtor	80GB	DiamondMax® 10	6V080E0	VA111900
TERATOWER SATARAID	Samsung	1000GB	SpinPoint™ F1	HD103UJ	1AG01113
TERATOWER SATARAID II	Samsung	400GB	SpinPoint™ T133	HD400LJ	22100-15
TERATOWER SATARAID II	Samsung	250GB	SpinPoint™ S250	HD250HJ	FH100-06
TERATOWER SATARAID II	Samsung	250GB	SpinPoint™ S250	HD250HJ	01.03A01
TERATOWER SATARAID II	Samsung	80GB	N/A	SP0812C	SU100-34
TERATOWER SATARAID II	Seagate	2000GB	Barracuda® XT	ST32000641AS	CC13
TERATOWER SATARAID II	Seagate	1500GB	Barracuda® 7200.11	ST3150031AS	SD17
TERATOWER SATARAID II	Seagate	1500GB	Barracuda® 7200.11	ST31500341AS	SD17
TERATOWER SATARAID II	Seagate	1000GB	Barracuda® 7200.11	ST31000340AS	SD15
TERATOWER SATARAID II	Seagate	1000GB	Barracuda® ES2	ST31000340NS	SN04
TERATOWER SATARAID II	Seagate	750GB	Barracuda® 7200.10	ST3750640AS	3.AAC
TERATOWER SATARAID II	Seagate	750GB	Barracuda® ES2	ST3750330NS	SN04
TERATOWER SATARAID II	Seagate	640GB	Barracuda® 7200.12	ST360323AS	SD35
TERATOWER SATARAID II	Seagate	500GB	Barracuda® ES	ST3500630NS	SN04
TERATOWER SATARAID II	Seagate	500GB	Barracuda® 7200.11	ST3500320AS	SD15
TERATOWER SATARAID II	Seagate	400GB	Barracuda® 7200.10	ST3400620AS	12.01B01
TERATOWER SATARAID II	Seagate	320GB	Barracuda® 7200.10	ST3320620AS	3.AAK
TERATOWER SATARAID II	Seagate	320GB	Barracuda® 7200.11	ST3320613AS	SD22
TERATOWER SATARAID II	Seagate	250GB	Barracuda® ES	ST3250620NS	3.AEG
TERATOWER SATARAID II	Seagate	250GB	DiamondMax® 21	STM3250310AS	3.AAF
TERATOWER SATARAID II	Seagate	250GB	Momentus® 5400.4	ST9250827AS	3.AAA

Model	Manufacturer	Capacity	Family	Part Number	Firmware
TERATOWER SATARAID II	Seagate	250GB	N/A	ST9200820AS	3.AAA
TERATOWER SATARAID II	Seagate	200GB	N/A	ST9200820AS	AKL2YK
TERATOWER SATARAID II	Seagate	160GB	Barracuda® 7200.10	ST3160815AS	4.AAB
TERATOWER SATARAID II	Seagate	160GB	Barracuda® 7200.10	ST3160815AS	3.AAD
TERATOWER SATARAID II	Seagate	160GB	Barracuda® 7200.7	ST3160827AS	3.42
TERATOWER SATARAID II	Seagate	160GB	SV35	ST3160812SV	3.ALP
TERATOWER SATARAID II	Seagate	120GB	Barracuda® 7200.7	ST3120827AS	3.42
TERATOWER SATARAID II	Seagate	80GB	Momentus® 5400.3	ST980811AS	3.ALC
TERATOWER SATARAID II	Seagate	80GB	DiamondMax® 10	6V080E0	3.AAD
TERATOWER SATARAID II	Seagate	60GB	Momentus® 5400.2	ST96812AS	3.06
TERATOWER SATARAID II	Seagate 2.5”	120GB	N/A	ST9120822AS	3.ALC
TERATOWER SATARAID II	Toshiba 2.5”	320GB	N/A	MK3252GSX	LV010D
TERATOWER SATARAID II	Toshiba 2.5”	250GB	N/A	MK2546GSX	LB012D
TERATOWER SATARAID II	Toshiba 2.5”	160GB	N/A	MK1637GSX	DL050J
TERATOWER SATARAID II	Toshiba SSD 2.5”	128GB	N/A	THNS128GE8BBDC	T1020061
TERATOWER SATARAID II	Western Digital	2000GB	WD Caviar® Black	WD2001FASS	N/I
TERATOWER SATARAID II	Western Digital	2000GB	WD Caviar® Green	WD20EADS-00R6B0	N/I
TERATOWER SATARAID II	Western Digital	1000GB	WD Caviar® Black	WD1002FAEX	N/I
TERATOWER SATARAID II	Western Digital	1000GB	WD Caviar® Green	WD10EACS-00ZJB0	1AA01113
TERATOWER SATARAID II	Western Digital	1000GB	WD Caviar® RE2-GP	WD1000FYPS	02.01B01
TERATOWER SATARAID II	Western Digital	1000GB	WD Caviar® Black	WD1001FALS	02.01B01
TERATOWER SATARAID II	Western Digital	1000GB	WD Caviar® RE-3	WD1001FYPS	02.01B01
TERATOWER SATARAID II	Western Digital	640GB	WD Caviar® Black	WD6402AAEX	N/I
TERATOWER SATARAID II	Western Digital	640GB	WD Caviar® Blue	WD6400AAKS	01.03B01
TERATOWER SATARAID II	Western Digital	500GB	WD Caviar® Black	WD5000AALS	01.01B01
TERATOWER SATARAID II	Western Digital	500GB	N/A	2F002	01.01A01
TERATOWER SATARAID II	Western Digital	400GB	WD Caviar® RE2	WD4000YR-01PLB0	D1.D6AD1
TERATOWER SATARAID II	Western Digital	400GB	WD Caviar® SE16	WD4000AAKS	12.01C01
TERATOWER SATARAID II	Western Digital	320GB	WD Caviar® Blue	WD3200AAJS	D5.D6H05
TERATOWER SATARAID II	Western Digital	320GB	WD Caviar® RE2	WD3201ABYS	13.01C02
TERATOWER SATARAID II	Western Digital	320GB	WD Caviar® SE	WD3200KS-00FB0	21.0DM21
TERATOWER SATARAID II	Western Digital	320GB	WD Caviar® Blue	WD3200AAJS	12.01B01
TERATOWER SATARAID II	Western Digital	320GB	WD AV	WD3200AVJS	12.01B02
TERATOWER SATARAID II	Western Digital	300GB	WD VelociRaptor	WD3000GLFS	03.03V01
TERATOWER SATARAID II	Western Digital	250GB	WD Scorpio ® Blue	WD2500BEVS	01.01A01
TERATOWER SATARAID II	Western Digital	250GB	WD Caviar® Blue	WD2500AAKS	FH100-06
TERATOWER SATARAID II	Western Digital	250GB	WD Caviar® RE	WD2500YS-01SHB1	2D.06CD6
TERATOWER SATARAID II	Western Digital	160GB	WD Caviar® RE2	WD1601ABYS	06.06H05
TERATOWER SATARAID II	Western Digital	160GB	WD Scorpio ® Blue	WD1600BEVS	04.01G04

Model	Manufacturer	Capacity	Family	Part Number	Firmware
TERATOWER SATARAID II	Western Digital	160GB	WD Caviar® Blue	WD1600AAJS	05.06H05
TERATOWER SATARAID II	Western Digital	160GB	WD Caviar® Blue	WD1600JS-22MHB0	02.010C3
TERATOWER SATARAID II	Western Digital	150GB	WD Caviar® Blue	WD1500AHFD	19.06P19
TERATOWER SATARAID II	Western Digital	100GB	WD Scorpio ® Blue	WD1000BEVS	01.06M01
TERATOWER SATARAID II	Western Digital	80GB	WD Caviar® Blue	WD800AAJS	D5.06H05
TERATOWER SATARAID II	Western Digital	80GB	WD Caviar® SE	WD800JD-00M8A1	10.01E01

Table last updated November 2010.

6.3 MOTHERBOARD COMPATIBILITY LIST

The *TERA TOWER SATA RAID II* Storage Appliance has been tested compatibility with a range of motherboard manufacturer. The table is updated as new motherboards are certified for compatibility. Only motherboards included in this table are supported.

Manufacturer	Product	North Bridge	South Bridge	BIOS
ABIT	IP-95 V1.0	VIA P4M890	VIA VT8237R	IP-95
ASUS	M2R32-MVP	AMD5180	ATI SB600	0712
ASUS	M3A78 PRO	AMD 780GX	ATI SB700	0202
ASUS	M3A78-T	AMD 790GX	ATI SB750	0204
ASUS	P4P800-X	INTEL 865PE	INTEL ICH5	1009
ASUS	P4P800	INTEL 865PE	INTEL ICH5R	1019
ASUS	P5GD1 PRO	INTEL 915P	INTEL ICH6R	1004
ASUS	P5LD2-X/1333	INTEL P945GC	INTEL ICH7	0115
ASUS	P5GZ-MX	INTEL 945GZ	INTEL ICH7	0801
ASUS	P5LD2	INTEL 945P	INTEL ICH7R	N/I
ASUS	P5WDG2WS PRO	INTEL 975X	INTEL ICH7R	0905
ASUS	P5B	INTEL P965	INTEL ICH8	1102
ASUS	P5B-VM	INTEL G965	INTEL ICH8	N/I
ASUS	P5K SE	INTEL P35	INTEL ICH8	1008
ASUS	P5D DELUXE	INTEL 965	INTEL ICH8R	1236
ASUS	P5B-E	INTEL P965	INTEL ICH8R	1803
ASUS	P5KR	INTEL P35	INTEL ICH9R	0605
ASUS	P5QL PRO	INTEL P43	INTEL ICH10	N/I
ASUS	P5Q PRO	INTEL P45	INTEL ICH10	0003
ASUS	P5Q PRO	INTEL P45	INTEL ICH10	1460
ASUS	M2NC51-AR	NVIDIA NFORCE 410 MCP	MCP43	N/I
ASUS	M2NC51-AR	NVIDIA NFORCE 430 MCP	MCP43	N/I
ASUS	M2N-SLI DELUXE	NVIDIA NFORCE 570 SLI MCP	MCP55	1604
ASUS	M2N-MX	NVIDIA NFORCE 430	NFORCE4	N/I
ASUS	M2N-MX	NVIDIA GEFORCE 6100	NFORCE4	N/I
ASUS	P5N-E SLI	NVIDIA NFORCE 650I SLI	NFORCE6	1101
ASUS	M3N78-EH	NVIDIA NFORCE 730A	MCP78	0412

Manufacturer	Product	North Bridge	South Bridge	BIOS
ASUS	P4S800D	SIS 655FX	SIS964	1012BETA003
ASUS	P5V800-MX	VIA P4M800	VIA VT8251	0802
ECS	761GXM-MV1.0	SIS 761GX	SIS 966L	02.21.2008
GIGABYTE	MA78GM-S2H	AMD780G	ATI SB700	F5
GIGABYTE	GA-GC230D	INTEL 945GC	INTEL ICH7	F1
GIGABYTE	GA-8I945PLG	INTEL 945PL	INTEL ICH7	F8
GIGABYTE	GA-P35-DS3X	INTEL P35	INTEL ICH9	V1.7060508
GIGABYTE	GA-EP45-DS3	INTEL P45	INTEL ICH10	F6
GIGABYTE	GA-EX58-UD3R	INTEL X58	INTEL ICH10R	FB
GIGABYTE	GA-73PVM-S2H	NVIDIA GEFORCE 7100	MCP73	F7A
GIGABYTE	GA-M78SM-S2H	NVIDIA GEFORCE 8200	NVIDIA GEFORCE 8200	F1
MSI	K9AG NEO2-DIGITAL	AMD 690G	ATI SB600	N/I
MSI	P35D3 PLATINUM	INTEL P35	INTEL ICH9R	V1.062807
MSI	K8N-NEO4H	NVIDIA NFORCE4 ULTRA	NFORCE4	V7.0020906
MSI	K9N4 SLI	NVIDIA NFORCE 500 SLI	NFORCE5	N/I
INTEL	D945GCLF2	INTEL 945GC	INTEL ICH7	LF94510J
INTEL	D201GLY2A	SIS 662	SIS 964	LY66210M

Table last updated November 2010.